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AFFORDABILITY OF SOCIAL PROTECTION IN DEVELOPING COUNTRIES: BURUNDI, INDONESIA AND PERU

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Abbreviations

DALY	Disability-Adjusted Life Year
DEA	Data Envelope Analysis
DIPI	Domestic Investment Priority Index
EAC	East African Community
GDP	Gross Domestic Product
GGE	General Government Expenditure
GHE	Government Health Expenditure
IMF	International Monetary Fund
ILO	International Labour Organisation
LIC	Low Income Country
MIC	Middle Income Country
NHA	National Health Accounts
ODA	Overseas Development Assistance
OECD	Organisation for Economic Cooperation and Development
OOP	Out of Pocket
OPM	Oxford Policy Management
SSA	Sub-Saharan Africa
SHI	Social Health Insurance
THE	Total Health Expenditures
USD	United States Dollars
WHO	World Health Organisation

1 Introduction / Context

The objective of this study is to provide rigorous evidence on the cost of social protection in various economic contexts. This information will be used by the actors involved in two-year Campaign “Social Protection for all” (NGOs, trade unions and mutual health insurances).

The Belgian NGOs in particular, would like to strengthen their advocacy and sensitization efforts by producing a new study on the affordability of a basic social protection package (social protection floor) in three different developing contexts (in terms of level of income, macro-economic and demographical dynamics).

In order to do this, we have chosen three countries: Burundi, Indonesia and Peru, covering all three types of economic contexts.

The review uses a similar methodology and comparable assumptions in all three countries, in order to allow for easy cross-country comparison.

Three macro-economic scenarios have been developed for each country: a base scenario describing the most likely growth trajectory based on available projects, an optimistic scenario describing a higher growth path, and a pessimistic scenario, describing a low-growth path.

Three social protection scale up scenarios have been developed for each country, describing the level of coverage and protection that could be afforded under each of the growth scenarios. The assumption is that higher growth would allow for more ambitious social protection interventions.

This study comes in the context of increasing focus on social protection by international organisations and national governments in developing countries, following the so-called 3-F crisis (financial, food, and fuel), which increased poverty levels and reduced government revenues. Consequently, pressure has grown to find more efficient and effective social protection mechanisms to protect the most vulnerable members of society against economic downturns and various types of chocks.

The International Labour Organisation (ILO) has developed a social protection floor concept, which provides a standardised platform for addressing these issues in developing countries. The present study adopts this conceptual framework as a starting point for our analysis and uses the tools developed by ILO for its implementation.

2 Literature Study

Social protection has for long been considered as unaffordable for low-income countries and even a luxury in the contemporary context of scarce resources, and as such almost an exclusive feature of wealthier economies (Cook, 2014).

During the last decade, a number of studies have demonstrated the affordability of basic social protection packages in a range of low and middle income countries. This literature has addressed the issue of affordability from different perspectives: assessment of costs (e.g. Pal et al, 2005; Berhendt et al., 2008, Hagen-Zanker & McCord, 2013), exploration of financing modalities (domestic resources, donors, global solidarity) (Ooms, 2011, Holmqist, 2012, De Schutter & Sepulveda, 2013) or economic and socio-political factors associated with the decision-making process of creating fiscal space to finance social protection (e.g. Beattie, 2000; Hickey, 2011).

Along similar lines, a range of middle income countries (like the Philippines, Ghana, Indonesia, Thailand or Vietnam) have engaged in extending their social protection coverage while they were still being classified as low income countries (Bender et al., 2013).

Relevant literature on the costing methodologies, as well as country-specific literature will be reviewed in relevant sections below.

3 Costing Methodology

3.1 Macroeconomic Assumptions

A picture of each countries macroeconomic environment is required to ensure that the social protection costing projections are made within sensible country-specific bounds. Official government data is taken for historic macroeconomic and fiscal sector indicators such as GDP, inflation, exchange rate, Government revenues, expenditures and debt. These are projected over the next five years using data from Government and IMF jointly agreed estimates.

Over the remaining ten years the macroeconomic and fiscal indicators are restrained by peer-benchmarks. These are set as the low or middle income country averages as each countries current income status and growth projections suggest. The underlying targets are shown in table 1. These set the level of available government revenues and expenditures. Other key variables such as Exchange Rates remain stable over the longer term.

Table 1: Macro Economic Targets by Income Status

	Low Income	Middle Income	High Income
Real Growth – Base Scenario	5%	6%	2%
Inflation	5%	5%	3%
Tax:GDP	17%	24%	34%
Current Expenditure:GDP	14%	21%	29%
Donor Funds:GDP	8.0%	0.3%	0.0%

Source: World Bank Development Indicators
Note: Growth & Inflation targets shown here are not used for Burundi as it is an EAC Member States which has its own underpinning convergence criteria targets.

The pace of economic growth, inflation, domestic revenues and external funding are set to meet the national goals of the governments in the medium term and thereafter move within the bounds of income country averages. These assumptions provides us with a base scenario and is the basis for the social protection costing.

The optimistic scenario raises the average fifteen year growth rate by two percentage points and slows the growth in the pessimistic scenario by one percentage point. This is shown for each country in Table 2.

Table 2: Real GDP Growth Rates for Scenarios

	Pessimistic	Base	Optimistic
Burundi	4%	5%	7%
Indonesia	5%	6%	8%
Peru	5%	6%	8%

Source: OPM assumptions

Therefore the macroeconomic assumptions ensures that the social protection costing is set within the limitations of the country-specific growth targets and can only use the available resources of the government (domestic and external). Each of the scenarios (pessimistic, base and optimistic) results in different levels of domestic tax revenues which will allow for variable social spending levels.

3.2 Social Protection Costing

The costing was carried out using the excel-based ILO/UNICEF Social Protection Floor costing tool, which is based on the 2012 R202 Recommendation concerning National Floors of Social Protection. By using the official ILO-UNICEF tool, we ensure that the adopted approach and methodology is consistent with international best-practice, and that results are comparable with existing official

costing studies carried out by these organisations. The choice of a standardised tool also allows us to make cross-country comparisons by ensuring that the modelled package is consistent across all three countries.

Several modifications, which are described in Table 3 below, have been made to this tool in order to ensure maximum comparability across countries, as well as compliance with the minimum standards defined in R202. The following changes have been made to the benefits listed in the ILO-UNICEF costing tool:

Table 3: Social benefits included in the costing

Social Protection Floor	UNICEF-ILO Costing Tool	Present Study
Basic income security for older persons		
Old Age Pension	All men and women 65+, 30% of GDP per capita, max US$1 PPP	No change
Basin income security for person in active age (unable to earn sufficient income (in particular case of sickness, unemployment, maternity and disability)		
Disability Benefit	Universal Disability Benefit for Individuals (age 5-64) not in age covered by pension nor child benefit	No change
Labor Market Program	Programme targeting unemployed youth between 18-24	This has been replaced by a public works programme targeting all able-bodied individuals from 18 years old up to the pension age. The administration cost has been increased from 10% of total transfer cost to 30%, to reflect the additional cost required for materials and supervisors/ engineers. It is assumed that this programme will target primarily under-employed and seasonally unemployed workers in the informal and agricultural sectors, and that it will operate through self-selection, based on the programme wage rate vs. prevailing market wage rate for comparable jobs. In this model, the programme wage rate has been set to match the base transfer amount for each scenario (15-25% of GDP per capita) and the coverage has been assumed to be proportional to the transfer amount (7.5-12.5% of participating work force). We deemed that the separation between formal/ informal labour market interventions seemed more appropriate for the case of low and lower-middle income countries than the separation by age groups.
Unemployment Benefit	Unemployed between 25-64	This has been kept, but the eligible age has been extended from 18 to pension age. In Burundi, the proportion of people classified as unemployed is vanishingly low (around 1%), due, presumably to the structure of the labour market, characterised by large under-employment and prevalence of subsistence agriculture. It is assumed that this benefit would cover primarily individuals employed in the formal sectors, and would presumably be conditional on prior contribution to a national social security fund.

Basic income security for Children		
Child Benefits	Children 0-14, benefits for max. 2 children per mother, 15% of GDP per capita, max US$0.5 PPP.	The maximum age of receipt of the benefit has been extended to 17 years under the optimistic scenario. The child grant is assumed to be an individual entitlement of the child, and does therefore not vary depending on the number of children in the household.
Orphan benefits for children not covered by Universal Child Benefit	Orphan (5-14) benefits for children not covered by Universal Child Benefit	This has been suppressed, as (a) it is not listed among the basic benefits recommended by the R202, and (b) it would create a duplication with respect to the universal child benefit.
Education Stipends	Children 6-9 enrolled in primary education and Children 15-17 enrolled in secondary education	This has been removed in order to avoid duplication with the universal child grant. It is assumed, based on existing evidence from unconditional cash transfer programmes, that part of this grant will be used to finance access to education for beneficiary children.
New Birth Registration Lump-sum Benefit	?	This has suppressed as it was aimed at facilitating birth registration, which is not listed as a basic benefit recommended by the R202. It has been replaced by a maternity benefit, which is listed in R202, but was missing from the tool (access to essential health care).
Access to essential health care		
Sickness Benefit	Not included in the UNICEF-ILO Costing tool	Sickness benefit is difficult to model, as it would require household survey data about the loss of productive working days due to illness. Consequently, this has been left out of the model.
Health Care Benefit		This has been added to simulate the cost of achieving Universal Health Coverage (UHC) by 2025. UHC offers a package of cost-effective services to the entire population with financial protection; i.e. financed through government (budget and mandatory health insurance) and official external support. The methodology for the health costing is dealt with in a separate section below, as this was estimated outside of the ILO/ UNICEF costing tool. A summary is set out here: The pessimistic package is costed at current levels of investment, i.e. assumes no change in prioritization of health over time, same basic health services offered within the existing health insurance schemes. The base package is costed at an international benchmark of 5% of GDP for Indonesia and Peru as per three independent research findings[1]. As a Low Income Country (LIC) Burundi's base scenario is set in line with a LIC peer benchmark of 6% of GDP (this is a peer benchmark of the highest 15% of health spenders in 11 LICs). The optimistic package is costed at a peer Middle Income Country (MIC) benchmark of 6% of GDP for Indonesia and Peru, (this is a peer benchmark of the highest 15% of health spenders in 22 MICs). Burundi's package is costed at the international benchmark of 86 USD per capita as per three independent research findings (this equates to an annual average of 20% of GDP for Burundi over the 15 years).
Maternity Benefit		This has been included in the model in the form of a one off cash transfer. Our model also allows for the possibility of providing paternal benefit, although this has been set to 0 in all scenarios.
Survivors benefits		Survivors' benefits have not been included, as this is country specific and often time-bound. It would therefore undermine the comparability of the model.

[1] International Benchmark = 5% of GDP or $86 per capita (whichever is highest) is required to achieve a basic package of UHC; see McIntyre and Meheus (2014), WHO Commission on Macroeconomics and Health (2001), and Taskforce on Innovative International Financing for Health Systems (2008) for more details.

3.2.1 Scenarios

For each of the benefits, three different scenarios have been considered, describing different levels of coverage and benefit amounts that can be achieved, given different levels of funding available under the macro-economic projections that will be developed separately. The scenarios can be summarised as follows:

Base Scenario

- **Transfer Amounts:** The transfer amount is assumed to be 20% of GDP per capita for all benefits, except for the formal unemployment benefit, which is 40%.

- **Eligibility:** Pension age is assumed to be 65. Children aged 0 to 14 are eligible for the universal child grant. All other benefits are as defined above.

Optimistic Scenario

- **Transfer Amounts:** The transfer amount is assumed to be 25% of GDP per capita for all benefits, except for the formal unemployment benefit, which is 50%.

- **Eligibility:** Pension age is assumed to be 60. Children aged 0 to 17 are eligible for the universal child grant. All other benefits are unchanged.

Pessimistic Scenario

- **Transfer Amounts:** The transfer amount is assumed to be 15% of GDP per capita for all benefits, except for the formal unemployment benefit, which is 30%.

- **Eligibility:** Pension age is assumed to be 70. Children aged 0 to 4 are eligible for the universal child grant. All other benefits are unchanged.

3.2.2 Health: Methodological Note and Scenarios

Universal Health Coverage (UHC) is the long term policy goal for this assessment. This entails offering a specified package of cost-effective services to the entire population with financial protection; i.e. financed through government (budget and mandatory health insurance) and external donor support. The goal is to reduce OOP expenditure not above 20% of THE to avoid 'catastrophic' health costs.

Recent research has shown that UHC will cost USD 86 per capita or 5% of GDP in public spending (including mandatory social health contributions), whichever is highest[2]. The 5% / 86 USD basic health package is defined as: *"enough to fund a sector that provides UHC up to basic quality standards (in terms of provision of care (adequate HR), outcomes (adequate infant mortality) and financial protection (adequately low OOP*))".[3] The High Level Task Force on Innovative Financing for Health goes further to state these costs are *"focused on a benefit package including HIV, TB, malaria, child health, immunization and maternal and newborn health interventions"*[4].

2 This draws on the work of Di McIntyre and Philip Meheus (2014) which considers the costs of UHC globally and refers to the work by the Commission on Macroeconomics and Health, the WHO normative work and the international task force on innovative financing for health. Full details are available in the Methodology Annex.

3 McIntyre and Meheus (2014), cited in OPM (2015) Opportunities and Challenges for the Integration of Health and HIV Financing.

4 High Level International Task Force on Innovative Financing for Health (2008), cited in OPM (2015) Opportunities and Challenges for the Integration of Health and HIV Financing.

Therefore with this as a goal in our analysis we define health spending as government budget and Social Health Insurance (SHI), plus any external financing. This we term 'official health spending' and represents the amount available for UHC.

For the projection scenarios there are three different assumptions around health costing which are shown in Table 4. Each scenario assumes the following:

The pessimistic scenario assume that there is no change in health policy in each country. Here the official health spending is stable as a percentage of GDP; i.e. governments (and donors) continue to invest in health as they have done over the past five years. As can be seen in the table the current investment levels are likely to be insufficient to ensure UHC now or in the future (less than the required 5% of GDP).

The base scenario aims to increase this spending towards international benchmark of 5% of GDP (as discussed above). This is a relevant goal for Indonesia and Peru as they have larger economies and 5% of their GDP will be over the minimum $86 per capita. For Burundi as a Low Income Country (LIC) a peer LIC benchmark is applied. This is set at the highest 15% of health spenders in 11 LICs. These invest 6% of their GDP in official health spending[5]. For all countries this could potentially provide a basic package of UHC.

The optimistic scenario will raise the investment in health further. Targets for Indonesia and Peru are set to the Middle Income Country (MIC) peer benchmark. This is set at the highest 15% of health spenders in 22 MICs. These invest 6% of their GDP in official health spending[6]. Burundi now reaches the international benchmark of $86 per capita. This level of financing averages 20% of GDP a year and is much greater than the 5% invested for Indonesia and Peru in the base scenario. This is a reflection of the level of development and income in Burundi; i.e. currently and over the next fifteen years 5% of Burundi's GDP is unlikely to reach international benchmark for UHC. The $86 per capita will be a very large investment. This scenario suggests that all countries will have enough health financing to achieve UHC.

Table 4: Health Spending Targets for each Scenario

	Pessimistic	Base	Optimistic
Burundi	Historical Trends 5% GDP	LIC Peer Benchmark 6% GDP	International Benchmark $86 pc (20% GDP on Av.)
Indonesia	Historical Trends 1% GDP	International Benchmark 5% GDP	MIC Peer Benchmark 6% GDP
Peru	Historical Trends 3% GDP	International Benchmark 5% GDP	MIC Peer Benchmark 6% GDP

Source: OPM assumptions.
Note: Burundi Base and Optimistic scenarios are slightly different from Indonesia and Peru due to the different income levels and how they interact with using proportional GDP targets.

[5] Eleven low income countries: Burundi, Congo DRC, Ethiopia, Haiti, Malawi, Madagascar, Mozambique, Rwanda, Tanzania, Uganda, and Zimbabwe.

[6] 22 middle income countries: Angola, Botswana, Brazil, Cameroon, Chad, China, India, Indonesia, Iran, Ivory Coast, Jamaica, Kenya, Lesotho, Namibia, Nigeria, Pakistan, South Africa, South Sudan, Swaziland, Ukraine, Vietnam, and Zambia.

4 Burundi Case Study

This section will provide an overview of the economic and policy context in Burundi which underpins the social and health care projections. It presents macro-economic projections with three different scenarios (pessimistic, optimistic and intermediate), which are aligned with the costing scenarios presented below. In other words, it is assumed that higher economic growth (optimistic scenario) will enable the government to deploy a more ambitious social protection policy, whereas the objectives of the policy may have to be adjusted downward in the opposite case.

4.1 Social Protection Policy

Burundi has had elements of a contributory social protection system since 1957, covering issues, such as old age pension, disability benefits and death. However, this system remains rudimentary and covers only the very small proportion of the population employed in the civil service and formal economy (2.5% of the population).

In addition, Burundi has recently introduced a health insurance system, called Carte d'Assistance Medicale (CAM), which offers free health care for pregnant women and children under 5, as well as selected vulnerable groups. The coverage of this system had reached 32% of the population by 2013.

Using the World Health Organisation (WHO) data for 2008/09 – 2011/12 the health sector in Burundi is heavily donor dependant[7]. 45% of Total Health Expenditure (THE) is supplied by external sources and only 13% is provided by the government. Households Out of Pocket (OOP) expenditures account for 27% of health expenditure and the remaining 15% is sourced from private companies. The allocation from the national budget to the health sector has been around 3% over these five years. THE as a percentage of GDP has averaged 8% (2008/09 – 2011/12).

This baseline data is used to project health expenditures up to 2030. The full methodology can be found in the Annex. The estimated THE in 2015 is 261 Million USD. This gives a current health spending per capita of 27 USD. The Governments share of this is 5 USD per capita, and donors contribute an additional 10 USD per person.

For the projection scenarios there are three different assumptions around health costing as follows:

Pessimistic – Official health spending is set at 5% of GDP. This is a simple projection of the recent trends in spending in Burundi. This suggests a rise in per capita official health spending from 18 USD in 2015 to 41 USD by 2030.

Base – Official health spending is set at 6% of GDP. This is a peer benchmark as it reflects the proportion of official health spending made by the top 15% health investors in a subset of eleven low income countries[8]. Whilst this is expected to be insufficient to cover an entire package health services for the entire country it could provide a sub-set for building UHC. The spending per capita begins at 21 USD in 2015 and grows to reach 58 USD by 2030.

Optimistic – Official health spending is set as 86 USD per capita (2012) as per the international findings for sufficient UHC spending. With annual inflation applied the official health spend per person will rise from 95 USD in 2015 to 147 USD by 2030. This equates to 27% of GDP in 2015 and declines to 13% by 2030 as the Burundian economy grows.

[7] Data in this paragraph is sourced from the WHO Global Health Expenditure Database which his based on the National Health Accounts (NHA) methodology, see http://apps.who.int/nha/database/Select/Indicators/en, and the Methodology Annex for more details.

[8] Countries: Burundi, Congo DRC, Ethiopia, Haiti, Malawi, Madagascar, Mozambique, Rwanda, Tanzania, Uganda, and Zimbabwe.

4.2 Macroeconomic Environment

Burundi has grown at an annual average rate of 6.7% over the past five years but remains a low income country[9]. The GDP per capita was estimated at 334 USD at end 2014/15 fiscal year. Table 5 shows that inflation has been high but avoiding double digits at 9%, and both fiscal deficit and public debt are at manageable levels (2009/10 – 2013/14).

Table 5 also shows projections for these key macroeconomic indicators for the base scenario - the full methodological details are set out in the Annex. In sum these medium to long term projections show that Burundi will have a challenge to keep a lid on inflationary pressures to ensure that they meet a real growth of 5% per annum. On average over the longer term inflation could fall to just above 4%. The Governments' fiscal deficit may become slightly higher than the current 3%, but public debt is expected to remain low after receiving debt relief in 2009/10. However, the IMF's latest Debt Sustainability Analysis states that Burundi remains at a 'high risk of debt distress'[10].

Table 5: Baseline and Base Scenario Projections for Burundi

	Baseline & Base Scenario Projections	
	2009/10-13/14 Average	**2015/16-29/30** Average
Real GDP Growth	6.7%	5.4%
Nominal GDP per capita (USD)	268	615
Inflation (Annual Change)	9.1%	4.3%
Fiscal Balance (%GDP)[1]	-3.0%	-4.8%
Tax:GDP Ratio	15.6%	14.4%
Public Debt (% GDP)	41.9%	25.4%

Source: OPM Macro Model
Notes: 1 = including grants.

GDP per capita is projected to grow from just over 300 USD in 2015 to around 950 in 2030. This suggests Burundi will remain a low income country over the next fifteen years. As such all macroeconomic indicators have been modelled to meet low income average levels by 2030[11]. For example a Tax:GDP ratio of 17% of GDP and recurrent expenditures grow to reach 14% of GDP. ODA levels are projected to remain nominally stable over the longer term, falling in real terms (see Annex A.4 for evidence). These assumptions will affect the fiscal space available for UHC and social protection as they will dictate the domestic and external financing available to the Burundian government.

The optimistic and pessimistic macroeconomic scenarios alter these assumptions, and the funds available for investment in UHC and social protection. This assumptions are described here and results shown in Table 6.

Optimistic Scenario: Burundi grows faster to achieve real growth of 7% per annum. This would be a gradual increase over the 15 years to reach 8% by 2030. The 7% target would be met by 2025, and the entire period average is 7%. Burundi may just reach middle income country by 2030 with a GDP per capita of around 1,100 USD by 2030 (almost 200 USD per person more than in the base scenario).

[9] IMF Country Report No. 14/83 (March 2014) 'Burundi Fourth Review Under the Extended Credit Facility Arrangement'.

[10] Ibid.

[11] These ratios were found on the World Bank Development Indicators Database.

Pessimistic Scenario: Burundi's GDP growth rate is reduced by an average of 1% per annum over the fifteen years. This gives a real growth rate of 4% over the time period and a resultant GDP per capita of around 800 USD by 2030 (around 150 USD less per person than in the base year).

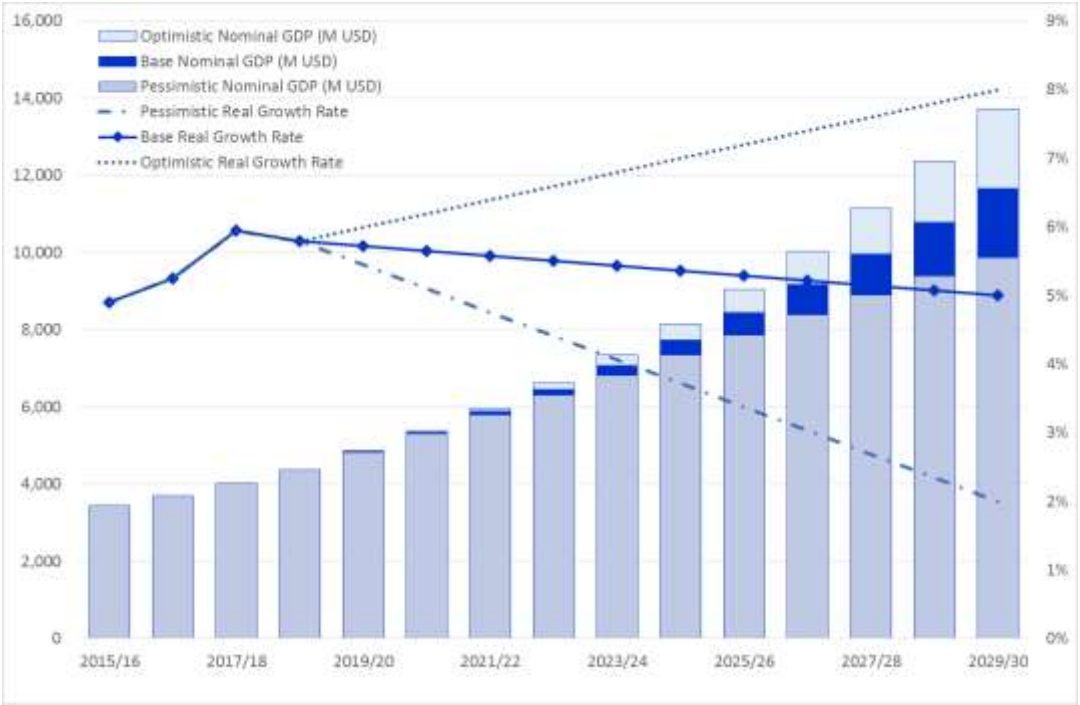
Table 6: Comparison of Base, Optimistic and Pessimistic Scenario Projections for Burundi

	Base	Optimistic	Pessimistic
	2015-2030 Average	**2015-2030** Average	**2015-2030** Average
Real GDP Growth[1]	**5%**	**7%**	**4%**
Nominal GDP per capita (USD) in 2030	***963***	***1,135***	***815***
Inflation (Annual Change)	4.3%	4.3%	4.3%
Tax Revenues (M USD)	**1,026**	**1,104**	**955**
Tax Spend per capita (USD) in 2030	***164***	***193***	***139***

Source: OPM Macro Model
Notes: All averages apart from the GDP per capita and Tax Spend per capita which are as at end of period 2030.

The divergent growth projections are depicted in Figure 1. This shows that the GDP growth in the optimistic scenario could bring an additional 2.1 billion USD to the Burundian economy compared to the base scenario, (and almost 4 billion when compared to the pessimistic scenario).

Figure 1: Economic Growth Projections for Burundi: Nominal GDP (M USD) and Real Growth Rates



Source: OPM Macro Model

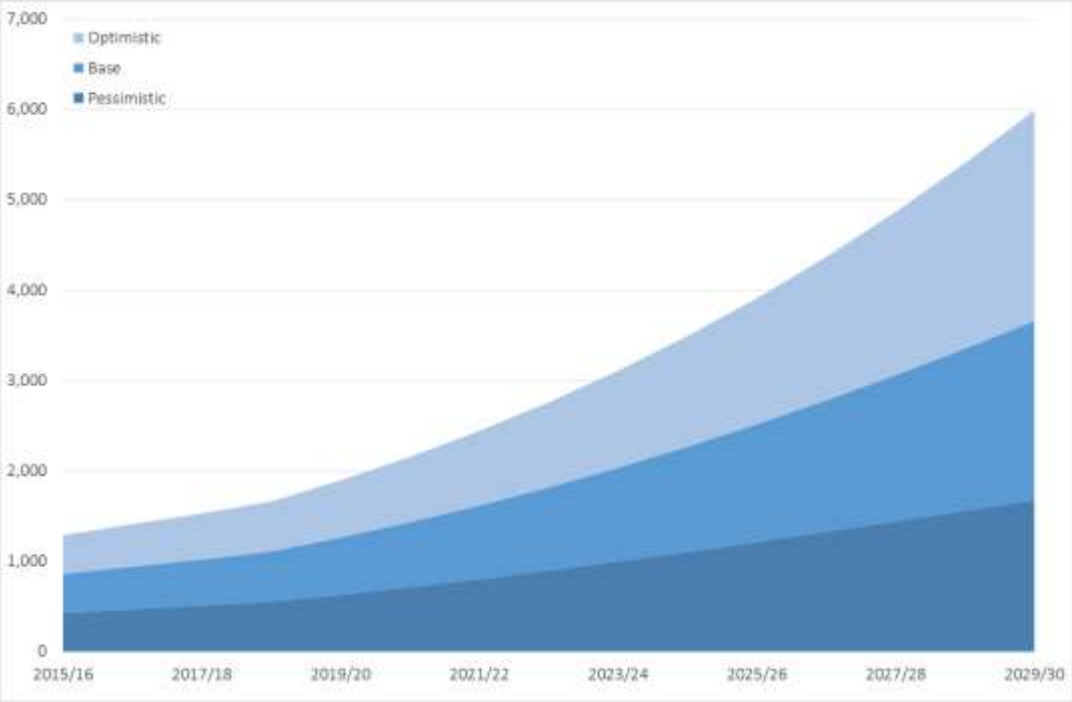
As these growth rate changes do not raise Burundi into a different income status all other indicators remain the same to ensure a consistent macroeconomic framework[12]. The varying growth rates do provide Burundi with varying levels of domestic tax revenues. As Figure 2 shows the base scenario

[12] The optimistic scenario is only marginally a middle income status in the final year of projections and so unlikely to be able to achieve middle income indicators within the fifteen year timeframe.

could result in 2 billion USD in domestic taxes by 2030. The optimistic scenario raises this by 18% and the pessimistic reduces tax revenues by 15%.

Currently the level of domestic tax revenues provide 44 USD per capita. In the base scenario by 2030 the tax spending is projected as 164 USD per capita; almost four times the current spending per person. The optimistic projections show that spending could reach 193 USD per capita, and the pessimistic scenario gives only 139 USD per capita by 2030. Considering the current government spending on health is only 5 USD per capita[13], while the total government spending on transfers and social benefits is 13 USD per person according to IMF estimations. This allows for a wide range of growth prospects in health and social protection spending.

Figure 2: Projections for Tax Revenues in Burundi (M USD)



Source: OPM Macro Model

4.3 Social Protection Findings

4.3.1 Base Scenario

Under the base scenario, total public expenditures for social protection would amount to 12.7% of GDP by 2025, compared to 4.94% in 2010 (2014/15 ILO Report on Social Protection). The two largest expenditure posts would be universal health coverage (6% of GDP) and the child Benefit (4%), followed by the old age pension (1.1%).

The maternity benefit and disability benefit would be negligible (0.4% and 0.7% of GDP, respectively) due to the relatively small number of beneficiaries receiving the benefit in any given year.

Similarly, the labour market interventions would be minute. In the case of the formal unemployment benefit, this is due to the very small number of eligible beneficiaries, due to the reduced size of the formal labour market. The projections provided by the ILO indicate that formal unemployment is expected to affect no more than 1% of the labour force (the formal unemployment benefit

[13] Total Health Expenditure (THE) per capita is 27 USD. THE = sum of all spending on health from government, donor funding, households out of pocket, and private sector contributions, as per National Health Accounts definition.

representing 0.1% of GDP). The public works programme on the other hand is expected to cost 0.4% of GDP, covering up to 10% of the labour force employed in the informal sector.

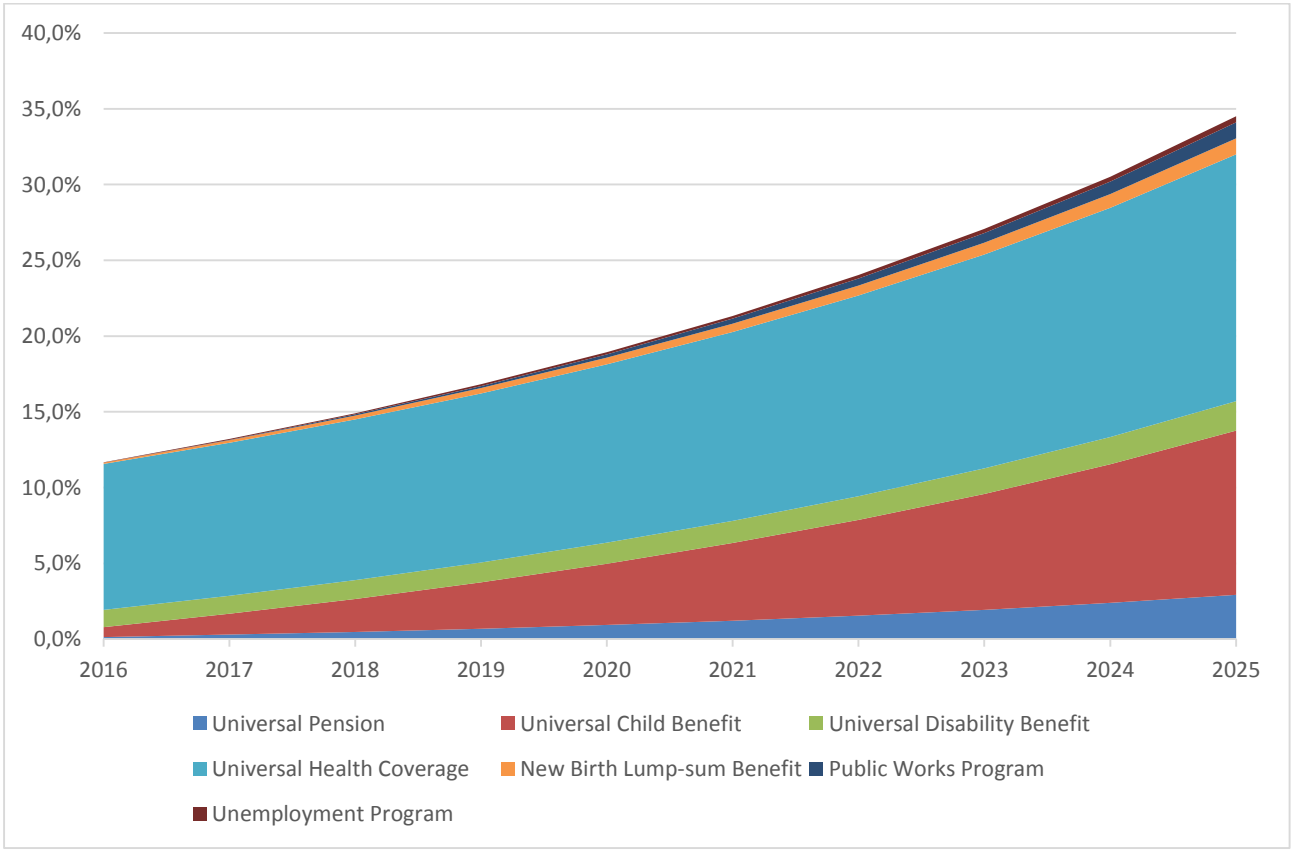
Table 7: Burundi Base Scenario - Social protection expenditure (% of GDP), by type of transfer

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Universal Pension	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.1
Universal Child Benefit	0.4	0.8	1.2	1.6	2.1	2.5	2.9	3.3	3.6	4.0
Universal Disability Benefit	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Universal Health Coverage	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Maternity Benefit	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4
Public Works Program	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.4
Unemployment Benefit	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
TOTAL	7.3	7.9	8.4	9.0	9.7	10.3	10.9	11.5	12.1	12.7

Source: OPM calculations based on ILO/ UNICEF social protection model and UNFP population projections.

When compared to public revenue, social protection and health expenditures are expected to rise to close to 35% of total government revenue (see Figure 3 below). The bulk of this is accounted for by health expenditures (16.3%) and child benefits (10.8%).

Figure 3: Burundi Base Scenario - Social protection expenditure (% of Total Government Revenue), by type of transfer



4.3.2. Optimistic Scenario

Under the optimistic scenario, total public expenditures for social protection would amount to 29.3% of GDP by 2025. The increase is largely due to the fact that we assume that the government would be able to raise public health expenditures to USD86 per capita under this scenario, which is the minimum required to achieve adequate provision of basic health services according to Di McIntyre and Philip Meheus (2014). Other benefits would increase less dramatically, reaching a total of 11.8% of GDP for non-health related social protection expenditures.

Under this scenario, the child benefit remains the largest non-health expenditure post (7.8% of GDP), followed by old age pension (1.9%). All other benefits remain at less than 1% of GDP.

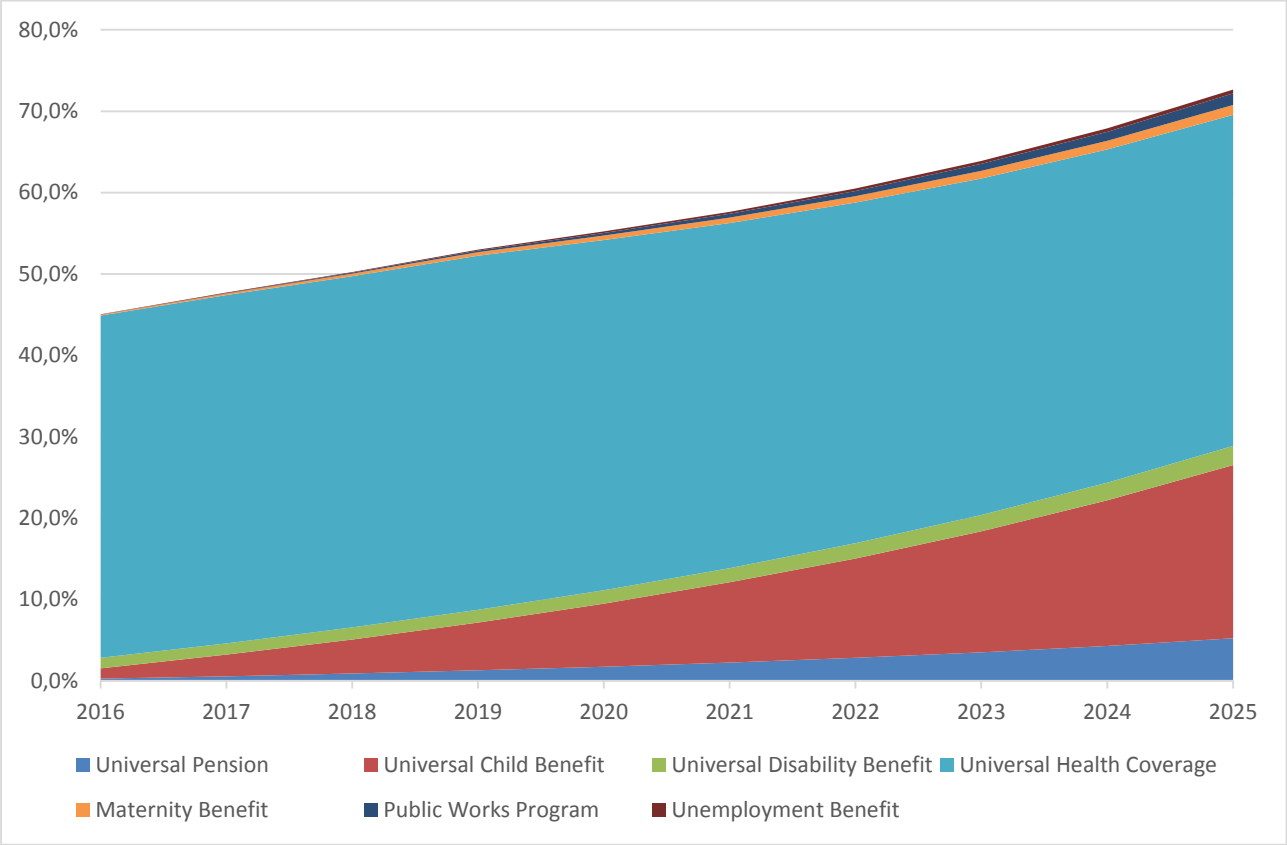
Table 8: Burundi Optimistic Scenario - Social protection expenditure (% of GDP), by type of transfer

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Universal Pension	0.2	0.3	0.5	0.7	0.9	1.1	1.3	1.5	1.7	1.9
Universal Child Benefit	0.8	1.6	2.4	3.2	4.0	4.7	5.5	6.3	7.1	7.8
Universal Disability Benefit	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9
Orphan Benefit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Universal Health Coverage	26.9	26.3	25.5	24.7	23.5	22.2	20.9	19.7	18.6	17.5
Maternity Benefit	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4
Public Works Program	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.5
Unemployment Benefit	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
TOTAL	28.7	29.3	29.6	29.9	29.7	29.5	29.4	29.3	29.3	29.3

Source: OPM calculations based on ILO/ UNICEF social protection model and UNFP population projections.

When compared to total government revenue, this scenario would represent close to ¾ (72.7%) of projected government revenue in 2025. The large majority of this would be health expenditures, with non-health related social protection expenditures representing a comparatively moderate 32% of total government revenue. This highlights the need for external donor funding in order to help Burundi achieve basic health coverage.

Figure 4: Burundi Optimistic Scenario - Social protection expenditure (% of Total Government Revenue), by type of transfer



4.3.3. Pessimistic Scenario

Under the pessimistic scenario, total health and social protection expenditures would reach 8.8% of GDP by 2025. In this scenario, health expenditures have been fixed to 5% of GDP. The universal child benefit would increase gradually to 1.9% of GDP. In spite of the lower level of GDP growth, all other benefits remain below 1% of GDP.

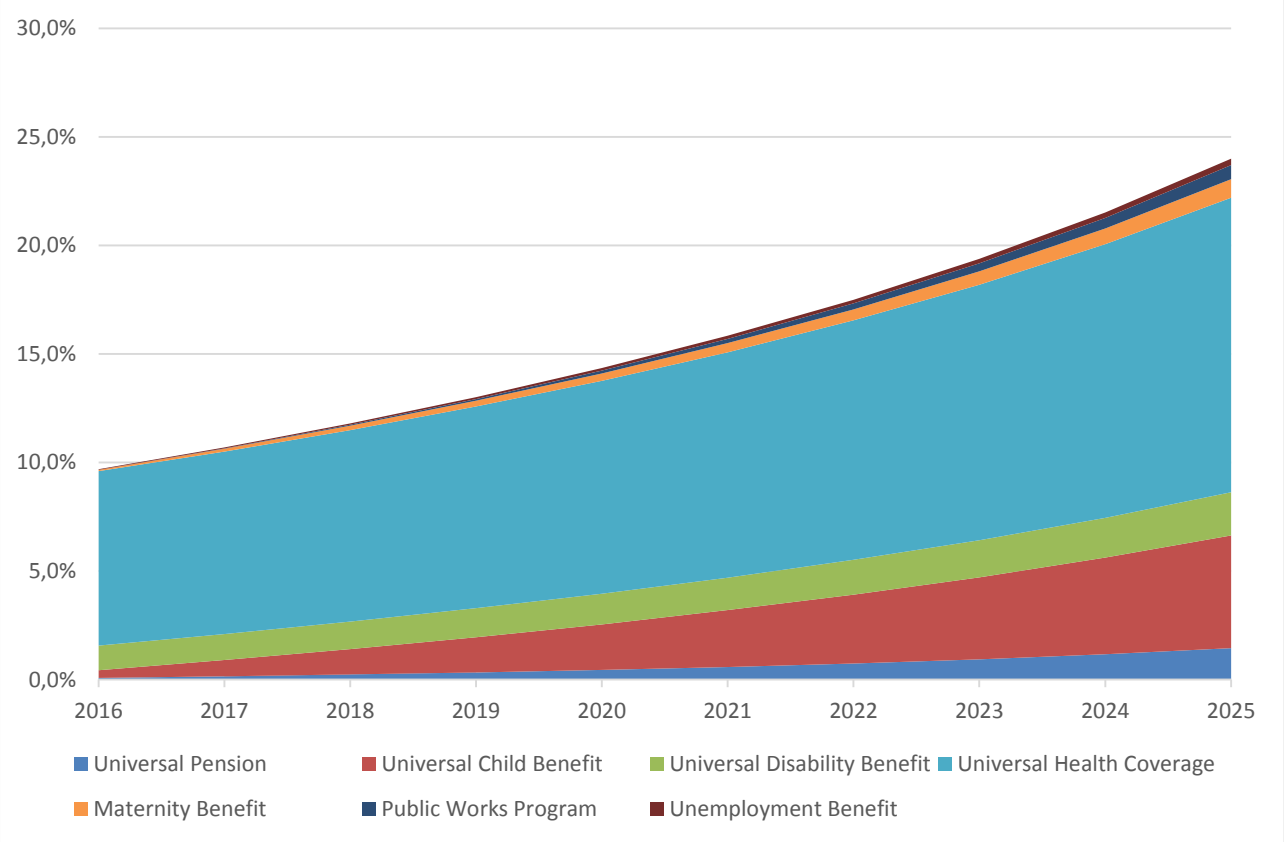
Table 9: Burundi Pessimistic Scenario - Social protection expenditure (% of GDP), by type of transfer

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Universal Pension	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.5
Universal Child Benefit	0.2	0.4	0.7	0.9	1.1	1.3	1.4	1.6	1.8	1.9
Universal Disability Benefit	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Orphan Benefit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Universal Health Coverage	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Maternity Benefit	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3
Public Works Program	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2
Unemployment Benefit	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
TOTAL	6.0	6.4	6.7	7.0	7.3	7.6	7.9	8.2	8.5	8.8

Source: OPM calculations based on ILO/ UNICEF social protection model and UNFP population projections.

In relation to total government revenue, this would represent close to a quarter (24%) of public revenue. The largest chunk of this (13.6%) would go to the health sector, while social transfer would amount to 10.4% of public revenue.

Figure 5: Burundi Pessimistic Scenario - Social protection expenditure (% of Total Government Revenue), by type of transfer



4.4 Conclusions for Burundi

The costings presented in this note show that in spite of the limited resources available in a low income country, like Burundi, it would be feasible and even affordable to extend a basic coverage of essential social protection and health interventions to all sections of the population, in line with international commitments on the social protection floor, and universal health coverage. Indeed, under our baseline scenario, total public expenditure on health and social protection would represent a comparatively moderate 12.7% of GDP in 2025, whereas many European countries spend in excess of 30% of GDP on these sectors.

However, given the limited revenue raising capacity of the Burundian government, these efforts would need to be supported by donors, at least in the initial stages. This would help to cover the funding gap without destabilising public finances or creating adverse macro-economic imbalances in the economy.

Furthermore, it should be noted that, given the country's limited financial capacity, the package of health services proposed under the base scenario for Burundi would fall far short of the USD86 per capita/ year recommended to achieve adequate basic health coverage. In order to achieve this level of coverage, health spending alone would need to increase to 17.5% of GDP, and this is assuming sustained high economic growth over the next 10 years. This highlights the significant challenges the country faces to achieve these basic social objectives, and the crucial role of development partners in helping it achieve these objectives.

5 Indonesia Case Study

This section will provide an overview of the economic and policy context in Indonesia which underpins the social and health care projections. It presents macro-economic projections with three different scenarios (pessimistic, optimistic and intermediate), which are aligned with the costing scenarios presented below. In other words, it is assumed that higher economic growth (optimistic scenario) will enable the government to deploy a more ambitious social protection policy, whereas the objectives of the policy may have to be adjusted downward in the opposite case.

5.1 Social Protection Policy

Social assistance programs targeting households are a relatively new development in Indonesia. Historically, the preference has been for universal subsidies to stabilize the prices of fuel and other commodities. Some programs involved rudimentary forms of targeting. For example, rural infrastructure programs or block grants to poor villages aimed at particular geographic areas, while policies such as credit for farmers targeted specific employment sectors.

However, the 1997 financial crisis and subsequent economic showed that a significant share of the population lacked adequate social protection or other means of coping with a big economic shock. Responding to the social impacts of the crisis, the government delivered a set of programs known as the Social Safety Net (Jaring Pengaman Sosial, or JPS). The JPS package consisted of a number of programs: job creation (various labour-intensive programs, block grants and small-scale revolving credit), a food security program, a subsidy for basic health services and an education assistance program designed for children of poor families.

In the years following the crisis, the government has developed and introduced a number of ongoing targeted welfare programs, while at the same time cutting fuel and other subsidies. Until recently, these programs were scattered, not comprehensive and used different targeting databases to identify recipients. But gradually the government has strengthened and improved the programs, and built a better database for targeting

Using the World Health Organisation (WHO) data for 2008 – 2013 the health sector in Indonesia is heavily dependent on Households Out of Pocket (OOP) expenditures[14]. 47% of Total Health Expenditure (THE) is supplied by OOP spending and 37% is provided by the government. External donor support accounts for just 1% of health expenditure and the remaining 15% is sourced from private companies. The allocation from the national budget to the health sector has been around 6% over these five years. THE as a percentage of GDP has averaged 3% (2008 – 2013).

This baseline data is used to project health expenditures up to 2030. The full methodology can be found in the Annex. The estimated THE in 2015 is 32.6 billion USD. This gives a current health spending per capita of 134 USD. The Governments share of this is 53 USD per capita, and donors contribute an additional 1 USD per person.

For the projection scenarios there are three different assumptions around health costing as follows:

Pessimistic – Official health spending is set at 1% of GDP. This is a simple projection of the recent trends in spending in Indonesia. This suggests a rise in per capita official health spending from 37 USD in 2015 to 137 USD by 2030.

Base – Official health spending is set at 5% of GDP. This is an international benchmark calculated to cover the costs of a basic package of health services for UHC (see section 3.2.2 above for more

[14] Data in this paragraph is sourced from the WHO Global Health Expenditure Database which his based on the National Health Accounts (NHA) methodology, see http://apps.who.int/nha/database/Select/Indicators/en, and the Methodology Annex for more details.

details). The spending per capita would begin at 187 USD in 2015 and grows to reach 724 USD by 2030.

Optimistic – Official health spending is set as 6% of GDP. This is a peer benchmark as it reflects the proportion of official health spending made by the top 15% health investors in a subset of 22 MICs[15]. The spending per capita would need to begin at 225 USD in 2015 and grow to reach 968 USD by 2030.

5.2 Macroeconomic Environment

Indonesia has grown at an annual average rate of 7.1% over the past five years but remains a lower-middle income country[16]. The GDP per capita was estimated at 3,747 USD at end 2015. Table 10 shows that inflation has been low at around 5%, and both fiscal deficit and public debt are at manageable levels (2010 – 2014).

Table 10 also shows projections for these key macroeconomic indicators for the base scenario - the full methodological details are set out in the Annex. In sum these medium to long term projections show that Indonesia could continue to have a solid real growth rate of 6% per annum over the time period with low inflation. The Governments' fiscal deficit may become slightly higher, moving towards 3% by 2030. Public debt is expected to remain low, and the IMF's latest Debt Sustainability Analysis states that Indonesian public debt levels are projected to remain 'low, but contingent liabilities arising from borrowing by state corporations pose some fiscal risk'[17].

Table 10: Baseline and Base Scenario Projections for Indonesia

	Baseline & Base Scenario Projections	
	2010-2014 Average	**2015-2030** Average
Real GDP Growth	7.1%	6.2%
Nominal GDP per capita (USD)	3,503	7,713
Inflation (Annual Change)	5.4%	5.2%
Fiscal Balance (% GDP)[1]	-1.6%	-2.9%
Tax:GDP Ratio	12.7%	16.9%
Public Debt (% GDP)	25.3%	26.8%

Source: OPM Macro Model
Notes: 1 = including grants.

GDP per capita is projected to grow from 3,700 USD in 2015 to around 14,000 in 2030. This suggests Indonesia will be a middle income country over the majority of the next fifteen years with a possibility of moving into high income status by 2029. As such all macroeconomic indicators have been modelled to meet middle income average levels by 2030[18]. For example a Tax:GDP ratio of 24% of GDP and recurrent expenditures grow to reach 21% of GDP. ODA levels are projected to remain nominally stable over the longer term, falling in real terms (see Annex A.4 for evidence). These assumptions will affect the fiscal space available for UHC and social protection as they will dictate the domestic and external financing available to the Indonesian government.

[15] 22 middle income countries: Angola, Botswana, Brazil, Cameroon, Chad, China, India, Indonesia, Iran, Ivory Coast, Jamaica, Kenya, Lesotho, Namibia, Nigeria, Pakistan, South Africa, South Sudan, Swaziland, Ukraine, Vietnam, and Zambia.

[16] Baseline data in this section draws from IMF WEO database and IMF Country Report No. 15/74 (March 2015) 'Indonesia 2014 Article IV Consultation'.

[17] Page 46, IMF Country Report No. 15/74 (March 2015) 'Indonesia 2014 Article IV Consultation'.

[18] These ratios were found on the World Bank Development Indicators Database.

The optimistic and pessimistic macroeconomic scenarios alter these assumptions, and the funds available for investment in UHC and social protection. This assumptions are described here and results shown in Table 11.

Optimistic Scenario: Indonesia grows faster to achieve real growth averaging 8% per annum. The macro assumptions under this scenario could mean that Indonesia becomes a high income country by 2028, with a GDP per capita of just less than 18,000 USD by 2030 (3,500 USD per person more than in the base scenario). We have chosen to continue to use the middle income average tax to GDP ratio (and other income-status-related indicators) because it may take time for the growth of the tax base to move towards high income levels. Moreover, this scenario has a growth rate of 8% pa compared to the global average for high income countries of only 2%. Replacing these would mean a slower growth and the country would remain a middle income country. However, it is important to note that if high income status is reached this could mean a greater fiscal space potential then presented in the findings.

Pessimistic Scenario: Indonesia's GDP growth rate is reduced by an average of 1% per annum over the fifteen years. This gives a real growth rate of 5% over the time period and a resultant GDP per capita of almost 13,000 USD by 2030 (around 1,500 USD less per person than in the base year).

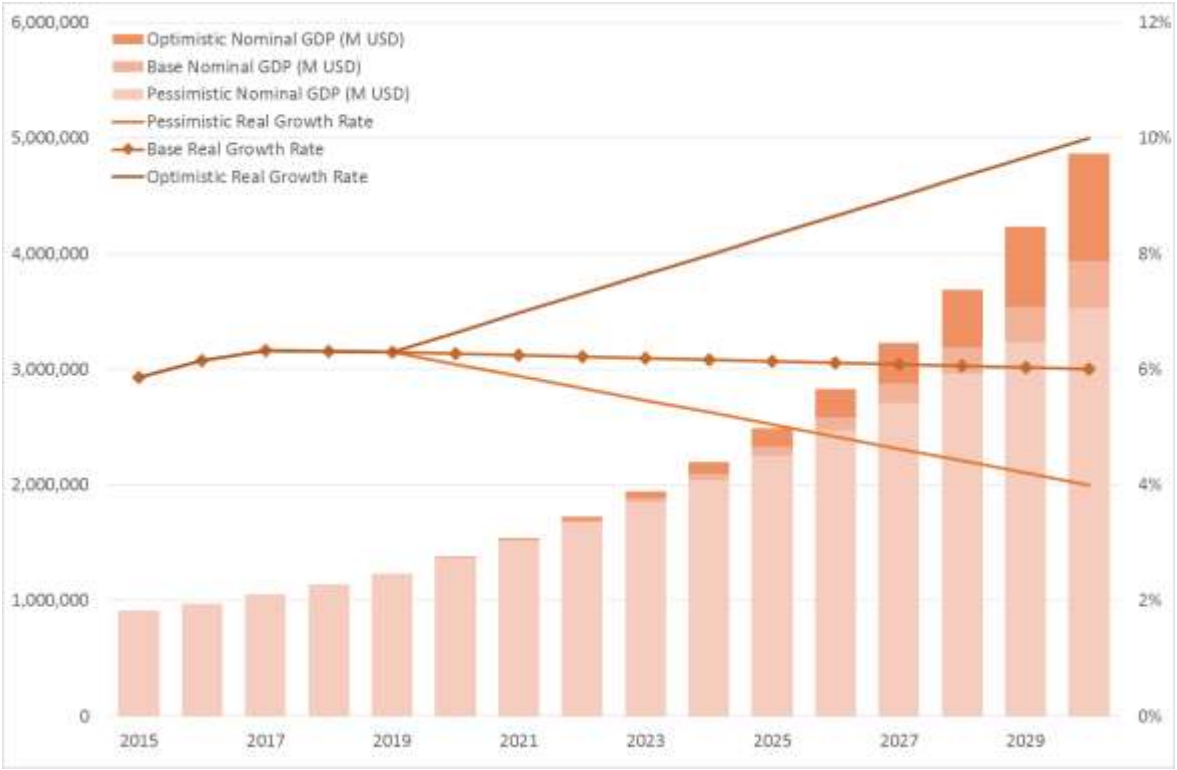
Table 11: Comparison of Base, Optimistic and Pessimistic Scenario Projections for Indonesia

	Base	Optimistic	Pessimistic
	2015-2030 Average	**2015-2030** Average	**2015-2030** Average
Real GDP Growth	**6%**	**8%**	**5%**
Nominal GDP per capita (USD) in 2030	***14,484***	***17,929***	***12,992***
Tax:GDP Ratio	16.9%	16.9%	16.9%
Tax Revenues (M USD)	**378,240**	**421,050**	**358,952**
Tax Spend per capita (USD) in 2030	***3,478***	***4,303***	***3,118***

Source: OPM Macro Model
Notes: All averages apart from the GDP per capita and Tax Spend per capita which are as at end of period 2030.

The divergent growth projections are depicted in Figure 6**Error! Reference source not found.**. This shows that the GDP growth in the optimistic scenario could bring an additional 935 billion USD to the Indonesian economy compared to the base scenario, (and almost 1,340 billion when compared to the pessimistic scenario).

Figure 6: Economic Growth Projections for Indonesia: Nominal GDP (M USD) and Real Growth Rates



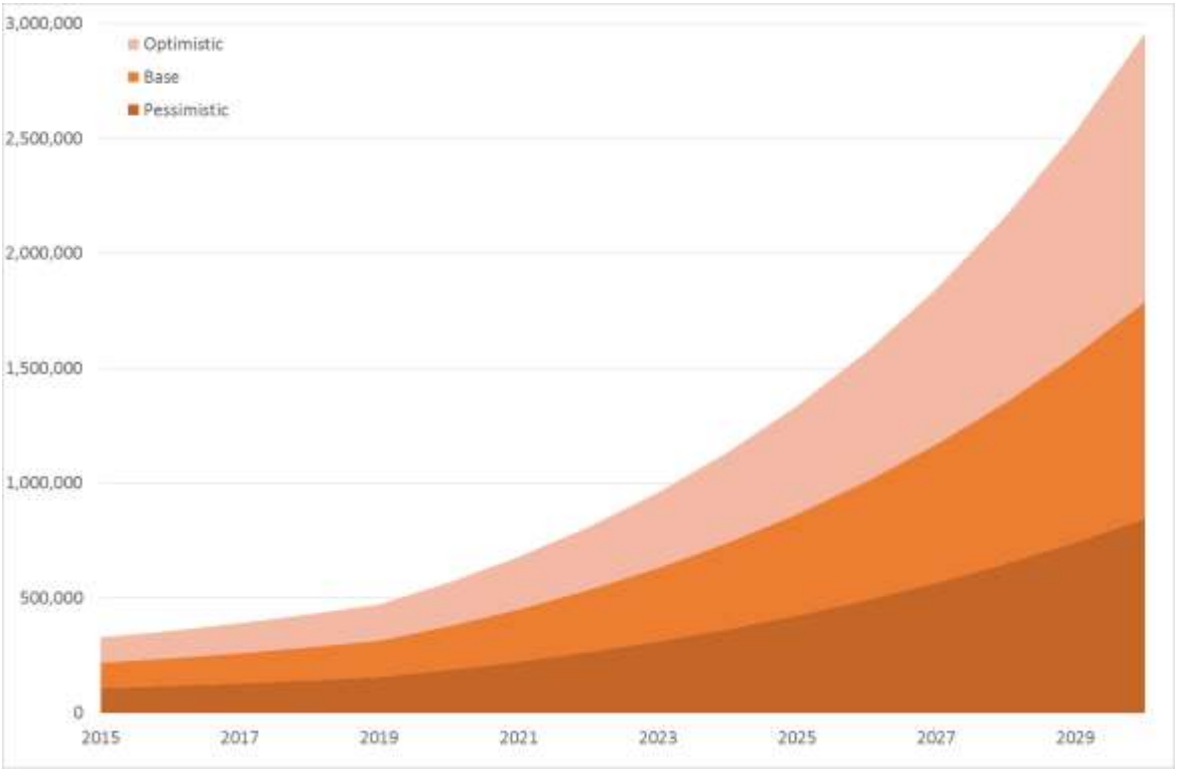
Source: OPM Macro Model

As these growth rate changes do not raise Indonesia into a high income status until the end of the time period all other indicators remain the same to ensure a consistent macroeconomic framework[19]. The varying growth rates do provide Indonesia with varying levels of domestic tax revenues. As Figure 7 shows the base scenario could result in 944 billion USD in domestic taxes by 2030. The optimistic scenario raises this by 24% and the pessimistic reduces tax revenues by 10%.

Currently the level of domestic tax revenues provide 450 USD per capita. In the base scenario by 2030 the tax spending is projected as 3,500 USD per capita; almost eight times the current spending per person. The optimistic projections show that spending could reach 4,300 USD per capita, and the pessimistic scenario gives just over 3,000 USD per capita by 2030. Considering the current government spending on health is only 53 USD per capita, this growth in fiscal space allows for a wide range of growth prospects in health and social protection spending.

[19] The base scenario is only a high income status in the final two years of projections and so may not be able to achieve high income indicators within the fifteen year timeframe.

Figure 7: Projections for Tax Revenues in Indonesia (M USD)



Source: OPM Macro Model

5.3 Social Protection Findings

5.3.1 Base Scenario

Under the base scenario, total public expenditures for social protection would amount to 12.2% of GDP by 2025. The two largest expenditure posts would be universal health coverage (5% of GDP) and the child Benefit (2.5%), followed by the old age pension (2%).

The maternity benefit and disability benefit, as well as the public works proramme would be negligible (0.4% of GDP, each) due to the relatively small number of beneficiaries receiving the benefit in any given year.

The formal unemployment benefit would be slightly larger in Indonesia (1.6% of GDP) than in Burundi, due to the comparatively larger size of the formal sector (32% of the labour force in 2009 according to the ILO).

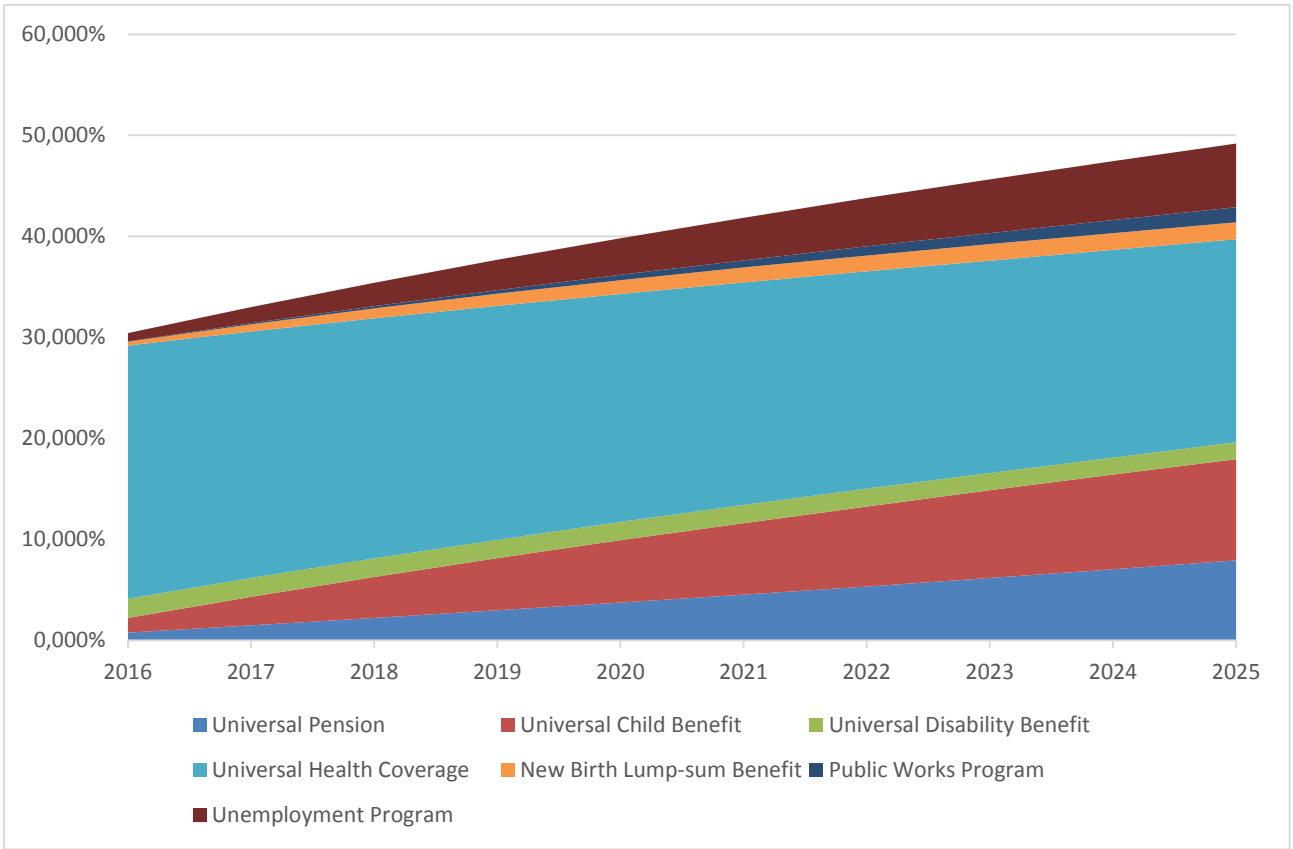
Table 12: Base Scenario Indonesia - Social protection expenditure (% of GDP), by type of transfer

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Universal Pension	0.1	0.3	0.5	0.6	0.8	1.0	1.2	1.5	1.7	2.0
Universal Child Benefit	0.3	0.6	0.9	1.1	1.4	1.6	1.8	2.1	2.3	2.5
Universal Disability Benefit	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Universal Health Coverage	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Maternity Benefit	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4
Public Works Program	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.4
Unemployment Benefit	0.2	0.3	0.5	0.6	0.8	1.0	1.1	1.3	1.4	1.6
TOTAL	6.0	6.7	7.4	8.1	8.8	9.5	10.2	10.9	11.5	12.2

Source: OPM calculations based on ILO/ UNICEF social protection model and UNFP population projections.

When compared to public revenue, social protection and health expenditures are expected to rise to close to 50% of total government revenue (see Figure 8 below). The bulk of this is accounted for by health expenditures (20.1%) and child benefits (10%). Universal pension and unemployment benefits would represent, respectively, for 7.9% and 6.3% of total government revenue.

Figure 8: Base Scenario Indonesia - Social protection expenditure (% of Total Government Revenue), by type of transfer



5.3.2. Optimistic Scenario

Under the optimistic scenario, total public expenditures for social protection would amount to 18.2% of GDP by 2025. The largest increases are seen for the child benefit (5.2% of GDP) and the universal pension (3.8%). This is due to the increased coverage of these benefits. Health expenditures remain comparatively modest, as the minimum spending threashold of USD86 per capita remains within the 6% of GDP range.

Other benefits do not change significantly as % of GDP.

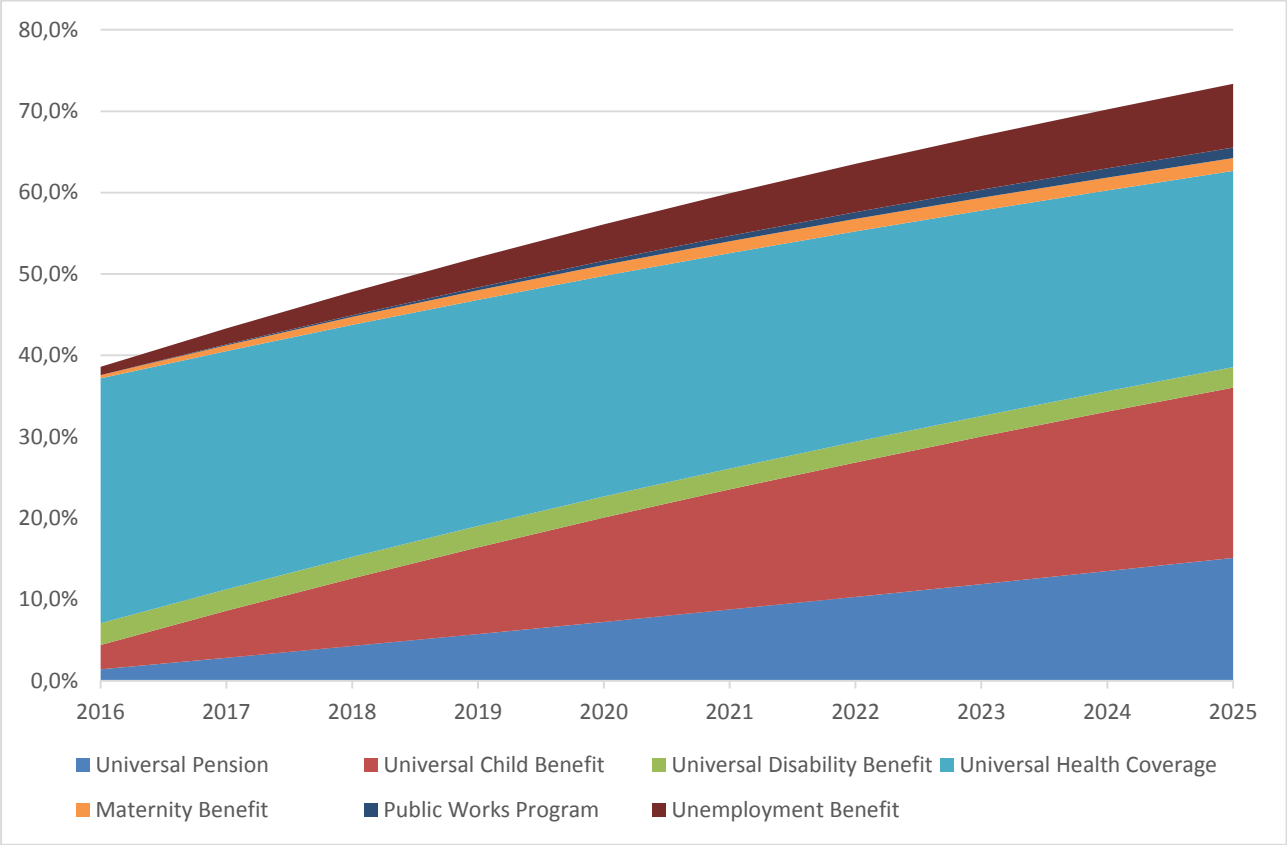
Table 13: Optimistic Scenario Indonesia - Social protection expenditure (% of GDP), by type of transfer

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Universal Pension	0.3	0.6	0.9	1.2	1.6	2.0	2.4	2.8	3.3	3.8
Universal Child Benefit	0.6	1.2	1.8	2.3	2.8	3.3	3.8	4.3	4.8	5.2
Universal Disability Benefit	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Universal Health Coverage	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Maternity Benefit	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4
Public Works Program	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3
Unemployment Benefit	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	1.9
TOTAL	7.7	8.9	10.1	11.2	12.4	13.6	14.8	15.9	17.1	18.2

Source: OPM calculations based on ILO/ UNICEF social protection model and UNFP population projections.

When compared to total government revenue, this scenario would represent close to ¾ (73.1%) of projected government revenue in 2025. The majority of this would go to different sorts of social transfers (47% of total government revenue), whereas health expenditures would account for the remaining 25%.

Figure 9: Optimistic Scenario Indonesia- Social protection expenditure (% of Total Government Revenue), by type of transfer



5.3.3. Pessimistic Scenario

Under the pessimistic scenario, total health and social protection expenditures would reach on 5.4% of GDP by 2025. This is mainly due to the extremely low share of health expenditures (1% of GDP), based on the assumption of continuing historical trends. Appart from health, only child benefits and unemployment benefits represent more than 1% of GDP (1.1% and 1.2% of GDP, respectively).

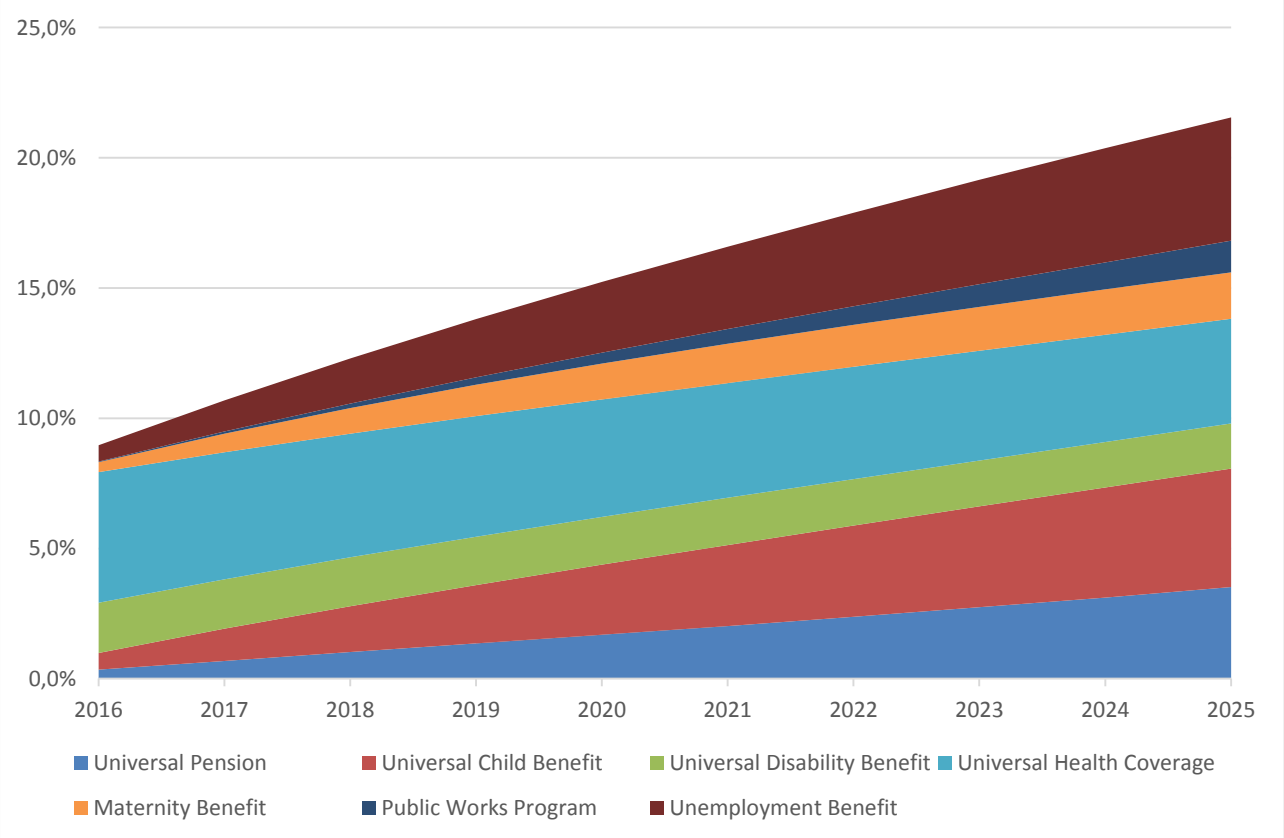
Table 14: Pessimistic Scenario Indonesia - Social protection expenditure (% of GDP), by type of transfer

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Universal Pension	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
Universal Child Benefit	0.1	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1
Universal Disability Benefit	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Universal Health Coverage	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Maternity Benefit	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4
Public Works Program	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3
Unemployment Benefit	0.1	0.2	0.4	0.5	0.6	0.7	0.8	1.0	1.1	1.2
TOTAL	1.8	2.2	2.6	3.0	3.4	3.8	4.2	4.6	5.0	5.4

Source: OPM calculations based on ILO/ UNICEF social protection model and UNFP population projections.

In relation to total government revenue, this would represent 22.5% of public revenue. The largest chunk of this (4.7%) would go to unemployment benefits and child benefits (4.6%). Public health expenditures would amount to 4% of total government revenue.

Figure 10: Pessimistic Scenario Indonesia - Social protection expenditure (% of Total Government Revenue), by type of transfer



5.4 Conclusions for Indonesia

The costings presented in this section show that it would be feasible and even affordable to extend a basic coverage of essential social protection and health interventions to all sections of the Indonesian population, in line with international commitments on the social protection floor, and universal health coverage.

Indeed, under our baseline scenario, total public expenditure on health and social protection would represent a comparatively moderate 12.2% of GDP by 2025, whereas many European countries spend in excess of 30% of GDP on these sectors. This falls well within the financing capacity of a middle income country like Indonesia.

Under the more ambitious growth scenarios, social protection programmes could be extended to even greater sections of the population, with total social protection and health costs rising only slightly to 18.2% of GDP.

However, in order to achieve adequate coverage and quality of basic services, donor funding would continue to be required in the medium term while the public revenue base is built up to the required level. Indeed, under our ambitious scenario, social protection and health expenditures would reach 73.1% of total government revenue, which is difficult to sustain[20].

Under our pessimistic scenario, health and social protection expenditures would represent 5.4% of GDP. However, this scenario would fall far short of the minimum standards required to achieve adequate social protection and health coverage.

[20] It should be noted that our optimistic scenario may underestimate the funds available to government in case of rapid and sustained economic growth. Indeed, under this scenarios, it is estimated that Indonesia would reach high income country status by 2028. Yet, our assumptions on public financing are based on its current middle income country status. High income countries, tend to have a significantly higher level of public spending in proportion to GDP, compared to low and middle income countries.

6 Peru Case Study

This section will provide an overview of the economic and policy context in Peru which underpins the social and health care projections. It presents macro-economic projections with three different scenarios (pessimistic, optimistic and intermediate), which are aligned with the costing scenarios presented below. In other words, it is assumed that higher economic growth (optimistic scenario) will enable the government to deploy a more ambitious social protection policy, whereas the objectives of the policy may have to be adjusted downward in the opposite case.

6.1 Social Protection Policy

After the economic crisis of the 1980's, Peru's social protection programmes were drastically reduced as part of the structural adjustment programmes, and re-organised around three pillars:

1. A large number of small disjointed programmes to address nutritional issues
2. A social fund (FONCODES) that finances income generating activities in poor rural communities, and
3. A seasonal public works programme that offers short-term employment

In 2005 an additional programme, called "Juntos" was introduced in four districts that offers conditional cash transfers to poor families with children.

In recent years, a number of additional programmes have been introduced, targeting children and other vulnerable groups. Furthermore, efforts have been undertaken to improve the coordination between programmes. In spite of these efforts, social protection spending remains low by regional standards, both in absolute terms and as a percentage of GDP.

The World Health Organisation (WHO) data for 2008 – 2013 shows that the government of Indonesia contributes 55% of Total Health Expenditure (THE)[21]. Less than 1% comes from external donor support and 6% is sourced from private companies. Out of Pocket (OOP) household expenditures have been falling over the past five years but still remain high averaging 38% of THE. The governments' allocation from the national budget to the health sector has been 14% over these five years. THE as a percentage of GDP has averaged 5% (2008 – 2013).

This baseline data is used to project health expenditures up to 2030. The full methodology can be found in the Annex. The estimated THE in 2015 is 11.8 billion USD. This gives a current health spending per capita of 380 USD. The Governments share of this is 223 USD per capita, and donors contribute an additional 2 USD per person.

For the projection scenarios there are three different assumptions around health costing as follows:

Pessimistic – Official health spending is set at 3% of GDP. This is a simple projection of the recent trends in spending in Peru. This suggests a rise in per capita official health spending from 175 USD in 2015 to 445 USD by 2030.

Base – Official health spending is set at 5% of GDP. This is an international benchmark calculated to cover the costs of a basic package of health services for UHC (see section 3.2.2 above for more details). The spending per capita would begin at 290 USD in 2015 and grows to reach 850 USD by 2030.

[21] Data in this paragraph is sourced from the WHO Global Health Expenditure Database which his based on the National Health Accounts (NHA) methodology, see http://apps.who.int/nha/database/Select/Indicators/en, and the Methodology Annex for more details.

Optimistic – Official health spending is set as 6% of GDP. This is a peer benchmark as it reflects the proportion of official health spending made by the top 15% health investors in a subset of 22 MICs[22]. The spending per capita would need to begin at 350 USD in 2015 and grow to reach 1,350 USD by 2030.

6.2 Macroeconomic Environment

Peru has grown at an annual average rate of 6.7% over the past five years and is an upper-middle income country[23]. The GDP per capita was estimated at 5,767 USD at end 2015. Table 15 shows that inflation has been low at less than 3%, and the government is balancing the budget with a small fiscal surplus. Public debt is at manageable 22.2% of GDP (2010 – 2014).

Table 15 also shows projections for these key macroeconomic indicators for the base scenario - the full methodological details are set out in the Annex. In sum these medium to long term projections show that Peru could continue to have a solid real growth rate of 6% per annum over the time period with low inflation. The Governments' fiscal deficit may become slightly higher, moving towards 2.5%. Public debt is expected to remain low, and the IMF's latest Debt Sustainability Analysis states that Peru's public debt levels are projected to remain stable as a proportion of GDP over the medium term[24].

Table 15: Baseline and Base Scenario Projections for Peru

	Baseline & Base Scenario Projections	
	2010-2014 Average	**2015-2030** Average
Real GDP Growth	6.7%	5.5%
Nominal GDP per capita (USD)	6,065	9,483
Inflation (Annual Change)	2.9%	3.2%
Fiscal Balance (% GDP)[1]	0.9%	-2.5%
Tax:GDP Ratio	18.4%	20.0%
Public Debt (% GDP)	22.2%	21.9%

Source: OPM Macro Model
Notes: 1 = including grants.

GDP per capita is projected to grow from 5,800 USD in 2015 to almost 17,000 in 2030. This suggests Peru will be a middle income country over the majority of the next fifteen years with a possibility of moving into high income status by 2028. As such all macroeconomic indicators have been modelled to meet middle income average levels by 2030[25]. For example a Tax:GDP ratio of 24% of GDP and recurrent expenditures grow to reach 21% of GDP. ODA levels are projected to remain nominally stable over the longer term, falling in real terms (see Annex A.4 for evidence). These assumptions will affect the fiscal space available for UHC and social protection as they will dictate the domestic and external financing available to the Peruvian government.

The optimistic and pessimistic macroeconomic scenarios alter these assumptions, and the funds available for investment in UHC and social protection. This assumptions are described here and results shown in Table 16.

[22] 22 middle income countries: Angola, Botswana, Brazil, Cameroon, Chad, China, India, Indonesia, Iran, Ivory Coast, Jamaica, Kenya, Lesotho, Namibia, Nigeria, Pakistan, South Africa, South Sudan, Swaziland, Ukraine, Vietnam, and Zambia.

[23] Baseline data in this section draws from IMF WEO database and IMF Country Report No. 15/133 (May 2015) 'Peru 2015 Article IV Consultation'.

[24] Page 47, IMF Country Report No. 15/133 (May 2015) 'Peru 2015 Article IV Consultation'.

[25] These ratios were found on the World Bank Development Indicators Database.

Optimistic Scenario: Peru grows faster to achieve real growth averaging 8% per annum. Peru may reach high income country by 2026 with a GDP per capita of around 22,500 USD by 2030 (5,500 USD per person more than in the base scenario).

Pessimistic Scenario: Peru's GDP growth rate is reduced by an average of 1% per annum over the fifteen years. This gives a real growth rate of 5% over the time period and a resultant GDP per capita of almost 15,000 USD by 2030 (around 2,000 USD less per person than in the base year).

Table 16: Comparison of Base, Optimistic and Pessimistic Scenario Projections for Peru

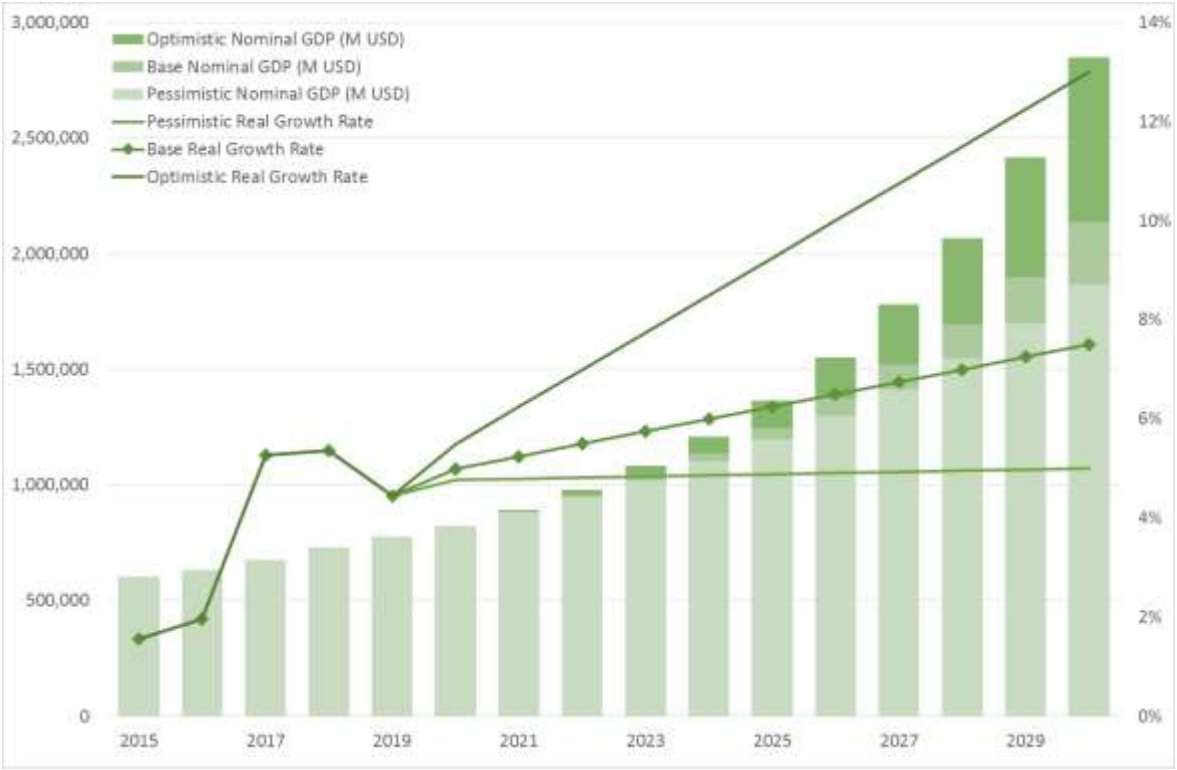
	Base	Optimistic	Pessimistic
	2015-2030 Average	**2015-2030** Average	**2015-2030** Average
Real GDP Growth	**6%**	**8%**	**5%**
Nominal GDP per capita (USD) in 2030	***16,950***	***22,621***	***14,817***
Tax:GDP Ratio	20.0%	20.0%	20.0%
Tax Revenues (M USD)	**67,654**	**77,069**	**63,917**
Tax Spend per capita (USD) in 2030	***4,068***	***5,429***	***3,556***

Source: OPM Macro Model
Notes: All averages apart from the GDP per capita and Tax Spend per capita which are as at end of period 2030.

The divergent growth projections are depicted in Figure 11**Error! Reference source not found.**. This shows that the GDP growth in the optimistic scenario could bring an additional 715 billion USD to the Peruvian economy compared to the base scenario, (and 983 billion when compared to the pessimistic scenario). As these growth rate changes do not raise Peru into a high income status until the end of the time period all other indicators remain the same to ensure a consistent macroeconomic framework[26].

[26] The base scenario is only a high income status by 2028 of projections and the optimistic by 2026. So may not be able to achieve high income indicators within the timeframe.

Figure 11: Economic Growth Projections for Peru: Nominal GDP (M USD) and Real Growth Rates

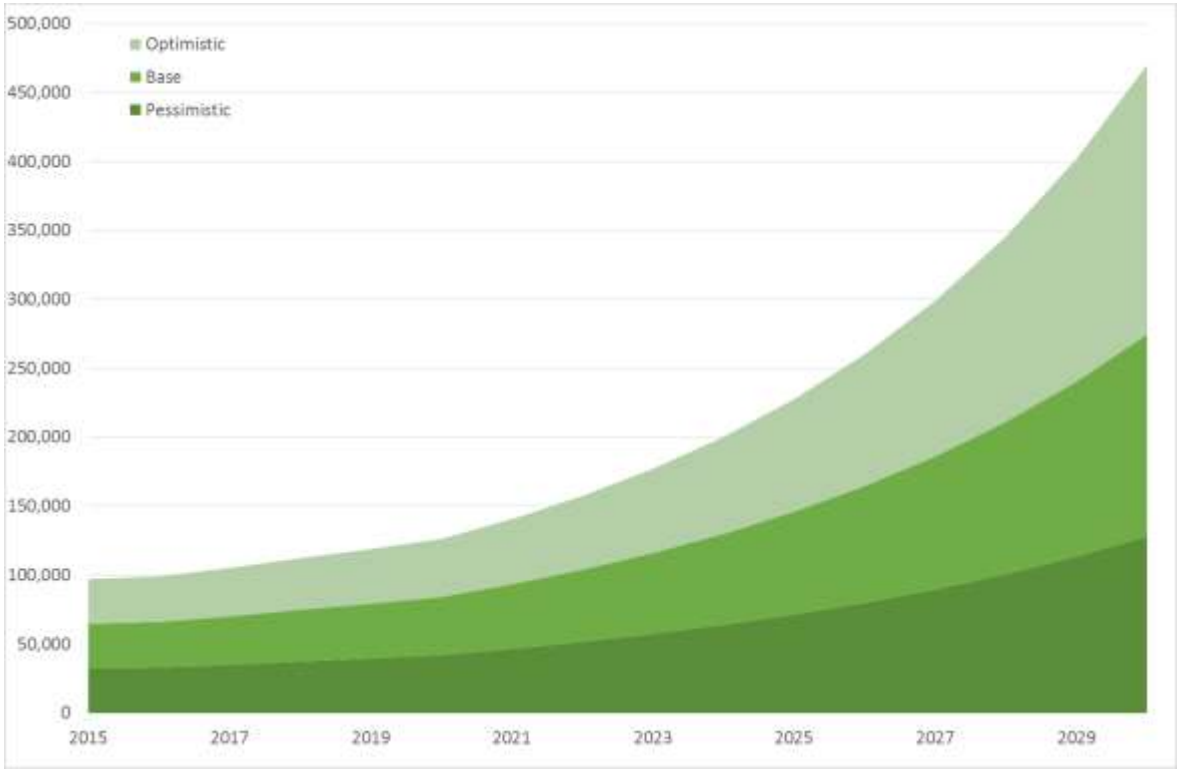


Source: OPM Macro Model

The varying growth rates do provide Peru with varying levels of domestic tax revenues. As Figure 12 shows the base scenario could result in 146 billion USD in domestic taxes by 2030. The optimistic scenario raises this by 33% and the pessimistic reduces tax revenues by 13%.

Currently the level of domestic tax revenues provide 1,040 USD per capita. In the base scenario by 2030 the tax spending is projected as over 4,000 USD per capita; almost four times the current spending per person. The optimistic projections show that spending could reach 4,400 USD per capita, and the pessimistic scenario gives just over 3,550 USD per capita by 2030. Considering the current government spending on health is only 223 USD per capita, this growth in fiscal space allows for a wide range of growth prospects in health and social protection spending.

Figure 12: Projections for Tax Revenues in Peru (M USD)



Source: OPM Macro Model

6.3 Social Protection Findings

6.3.1 Base Scenario

Under the base scenario, total public expenditures for social protection would amount to 13.2% of GDP by 2025. The two largest expenditure posts would be universal health coverage (5% of GDP) and the child Benefit (2.8%), followed by the old age pension (1.9%) and the disability benefit (1.4%).

The maternity benefit would be negligible (0.3% of GDP) due to the relatively small number of beneficiaries receiving the benefit in any given year. Similarly, the public works intervention would be minute (0.4% of GDP).

Formal unemployment benefit would represent 1.3% of GDP.

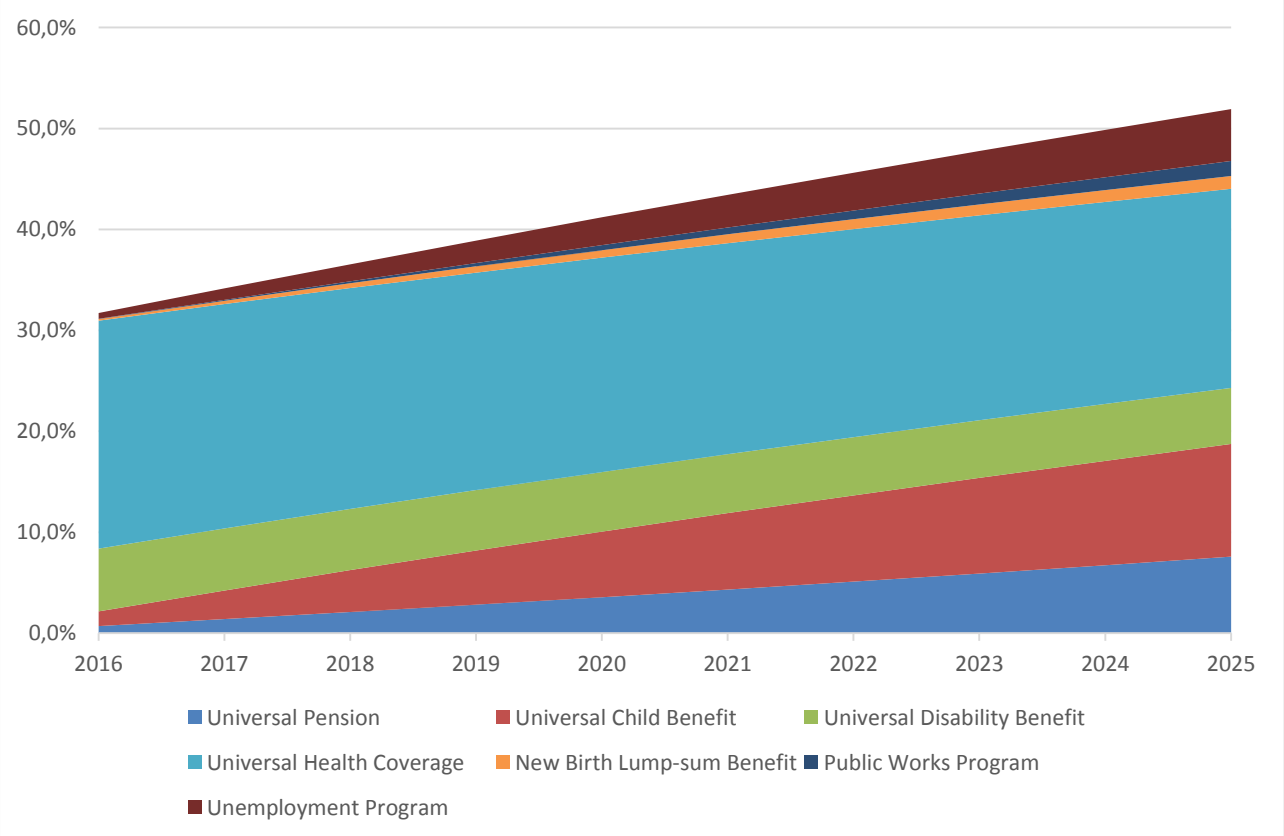
Table 17: Base Scenario Peru - Social protection expenditure (% of GDP), by type of transfer

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Universal Pension	0.2	0.3	0.5	0.7	0.8	1.0	1.2	1.5	1.7	1.9
Universal Child Benefit	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.3	2.6	2.8
Universal Disability Benefit	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Universal Health Coverage	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Maternity Benefit	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3
Public Works Program	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.4
Unemployment Benefit	0.1	0.3	0.4	0.5	0.6	0.8	0.9	1.0	1.2	1.3
TOTAL	7.0	7.7	8.3	9.0	9.7	10.4	11.1	11.8	12.5	13.2

Source: OPM calculations based on ILO/ UNICEF social protection model and UNFP population projections.

When compared to public revenue, social protection and health expenditures are expected to rise to close to 52% of total government revenue (see Figure 13 below). The bulk of this is accounted for by health expenditures (19.7%). All other social protection expenditures combined would amount to 24.7% of government revenue.

Figure 13: Base Scenario Peru - Social protection expenditure (% of Total Government Revenue), by type of transfer



4.3.2. Optimistic Scenario

Under the optimistic scenario, total public expenditures for social protection would amount to 19.2% of GDP by 2025. The increase is largely due to the increased coverage of the child benefit and universal pension. As in the case of Indonesia, the peer benchmark of 6% of GDP for health spending would be sufficient to cover the minimum health package of USD 86 per person.

Under this scenario, the child benefit remains the largest non-health expenditure post (5.8% of GDP), followed by old age pension (3.5%). Universal disability and unemployment benefits represent 1.7% and 1.6% of GDP, respectively. All other benefits remain at less than 1% of GDP.

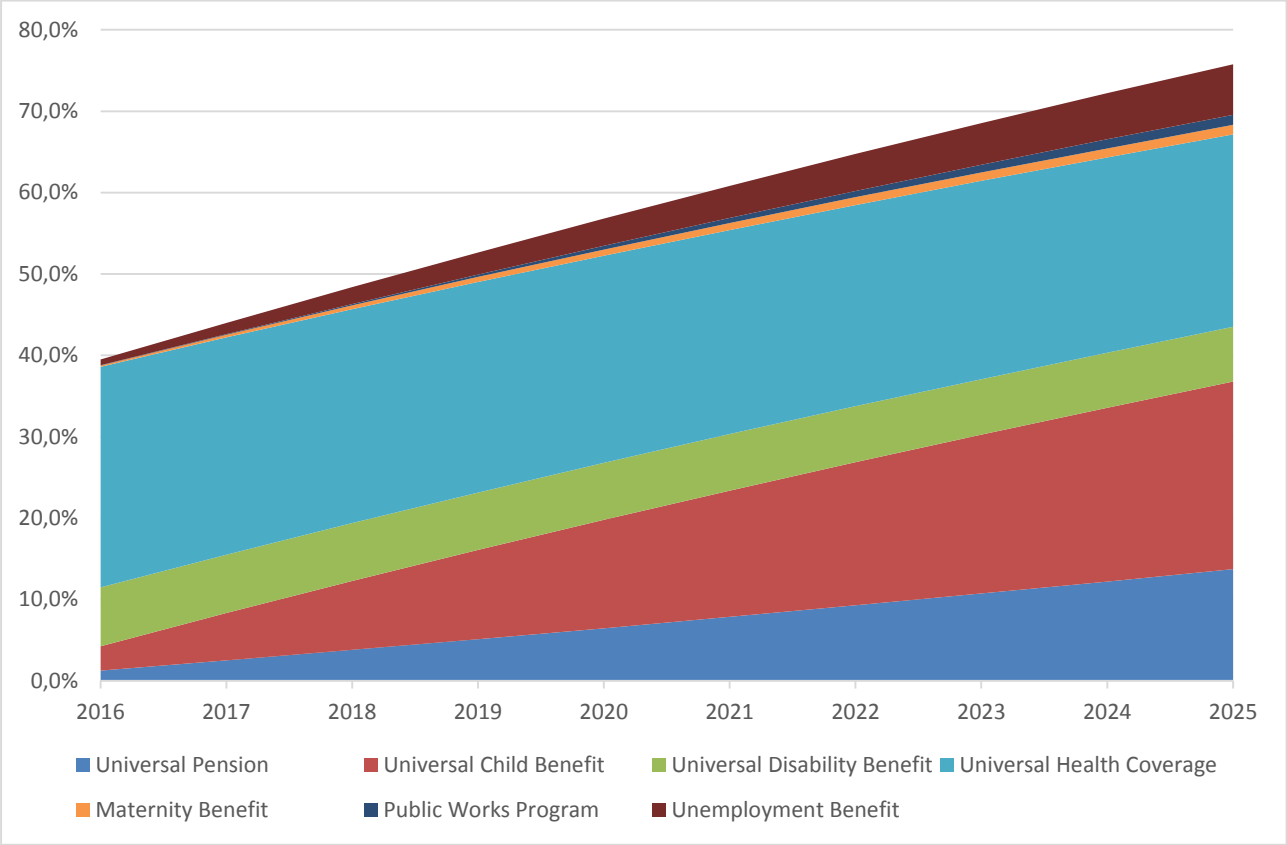
Table 18: Optimistic Scenario - Social protection expenditure (% of GDP), by type of transfer

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Universal Pension	0.3	0.6	0.9	1.2	1.5	1.9	2.3	2.6	3.1	3.5
Universal Child Benefit	0.7	1.3	1.9	2.5	3.1	3.7	4.3	4.8	5.3	5.8
Universal Disability Benefit	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7
Orphan Benefit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Universal Health Coverage	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Maternity Benefit	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3
Public Works Program	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3
Unemployment Benefit	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.3	1.4	1.6
TOTAL	8.7	9.9	11.1	12.2	13.4	14.5	15.7	16.9	18.0	19.2

Source: OPM calculations based on ILO/ UNICEF social protection model and UNFP population projections.

When compared to total government revenue, this scenario would represent ¾ (75.8%) of projected government revenue in 2025. Social protection expenditures alone would account for 52.1% of total government revenue, while health expenditures would amount to 23.7%.

Figure 14: Optimistic Scenario Peru - Social protection expenditure (% of Total Government Revenue), by type of transfer



4.3.3. Pessimistic Scenario

Under the pessimistic scenario, total health and social protection expenditures would reach 7.7% of GDP by 2025. In this scenario, health expenditures would continue at 3% of GDP. The universal child benefit would increase gradually to 1.3% of GDP and the formal sector unemployment benefit would amount to 1% of GDP. In spite of the lower level of GDP growth, all other benefits remain below 1% of GDP.

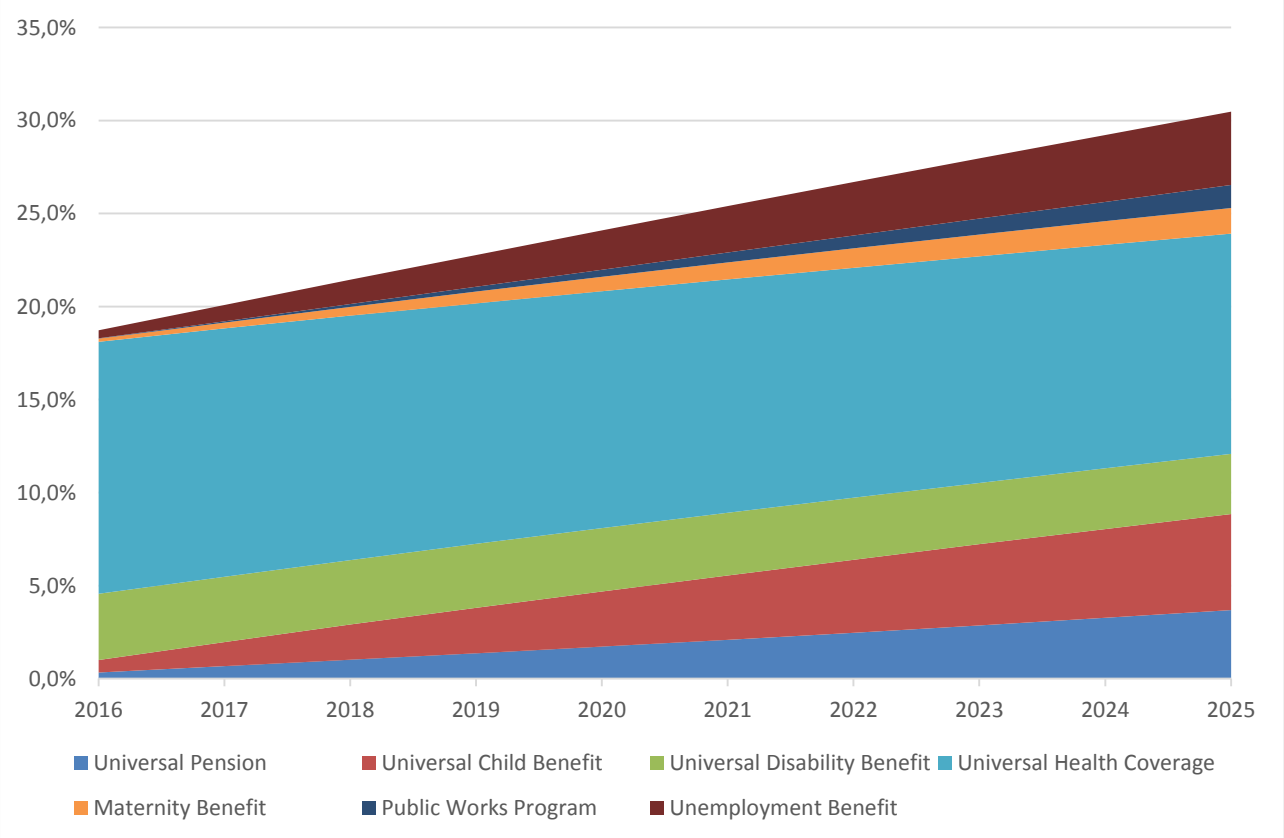
Table 19: Pessimistic Scenario Peru - Social protection expenditure (% of GDP), by type of transfer

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Universal Pension	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
Universal Child Benefit	0.1	0.3	0.4	0.6	0.7	0.8	1.0	1.1	1.2	1.3
Universal Disability Benefit	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Universal Health Coverage	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Maternity Benefit	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3
Public Works Program	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3
Unemployment Benefit	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
TOTAL	4.1	4.5	4.9	5.3	5.7	6.1	6.5	6.9	7.3	7.7

Source: OPM calculations based on ILO/ UNICEF social protection model and UNFP population projections.

In relation to total government revenue, this would represent close to a third (31.7%) of public revenue. The largest chunk of this (11.7%) would go to the health sector, while social transfer would amount to 20% of public revenue.

Figure 15: Pessimistic Scenario Peru - Social protection expenditure (% of Total Government Revenue), by type of transfer



6.1 Conclusions for Peru

The costings presented in this section show that it would be feasible and even affordable to extend a basic coverage of essential social protection and health interventions to all sections of the Peruvian population, in line with international commitments on the social protection floor, and universal health coverage. Indeed, under our baseline scenario, total public expenditure on health and social protection would represent a comparatively moderate 13.2% of GDP by 2025.

Even under our most ambitious scenario, total public spending on health and social protection would not exceed 20% of GDP, which falls short of current public spending levels on these sectors in many European countries. However, given the comparatively limited public revenue base of the Peruvian government, this would represent more than 75% of projected public revenue. This highlights the importance of ensuring that Peru continues to expand its revenue base in a sustainable manner.

Under our pessimistic scenario, health and social protection expenditures would represent 7.7% of GDP. However, this scenario would fall far short of the minimum standards required to achieve adequate social protection and health coverage.

7 Conclusions and Recommendations

7.1 Conclusions

The costing and financing study carried out in preparation for this paper details the minimum investment that would be required to achieve the social protection floor objectives for social protection, as well as universal health coverage by 2025. The projections were carried out for three very different types of countries (Burundi, Indonesia, and Peru) to verify the applicability of these principles across different contexts.

The key results are summarised in Table 20 below. They show that in all three countries, total expenditures as a % of GDP would remain moderate under the base scenario (between 12% and 13%). This is due to the fact that transfers are adjusted to average income to prevent labour market distortions.

However, under the optimistic scenario, a minimum threshold of expenditure has been defined at USD86/ capita/ year, based on available evidence on the cost of the minimum package of services. In the case of Burundi, this represents a significant proportion of its GDP per capita, which means that total costs rise to 29.3% percent. This highlights the continuing need for international support to help low income countries achieve minimum standards in health care.

In Peru and Indonesia, total costs remains below 20% of GDP under all configurations, which is moderate by international standards. However, when compared to total government revenue (TGR), the proportions rise to as much as 76% under the most ambitious scenario (Peru). This highlights the need for these middle income countries to increase their government revenue collection capabilities to meet the basic needs of their citizens.

Table 20: Projected total social protection and health expenditure in 2025 (% of GDP/ TGR), by scenario

	Burundi		Indonesia		Peru	
	% of GDP	% of TGR	% of GDP	% of TGR	% of GDP	% of TGR
Base Scenario	12.7	34.8	12.2	50	13.2	52
Optimistic Scenario	29.3	72.7	18.2	73.1	19.2	75.8
Pessimistic Scenario	8.8	24	5.4	22.5	7.7	31.7

Source: OPM calculations based on ILO/ UNICEF social protection model and UNFP population projections.

The findings of this study illustrate the fact that the minimum standard of protection provided by the social protection floor initiative, is sufficiently flexible to be adapted to various macro-economic and demographic contexts.

In all countries analysed here, the cost of social protection and universal health coverage estimated under our most likely (base) scenario, remained quite modest by international standards, and well within the projected limits for public revenue generation.

7.2 Recommendations

The apparent modest cost of social protection and universal health coverage as estimated under the most likely (base) scenario and under diverse socio-economic contexts can surely be considered as encouraging news for the proponents of social protection floors. However, its affordability does not automatically guarantee its realisation. In this last chapter we formulate some recommendations that development actors might consider as they work towards promoting the achievement of the social protection floor objectives. These recommendations draw on lessons learned from low and middle income countries where successful social protection reforms have already been undertaken.

1) **Political will, commitment and local ownership** have shown to be decisive for extending social protection as there may be considerable competition between different policy areas for public funding (Giovannetti et al. 2011; Duràn-Valverde et al. 2012). This is even more so in contexts where governments are confronted with limited fiscal space or fiscal deficit and moderate growth rates of public revenue. In any case, discussions and decisions around the creation of fiscal space and taxation reform with regards to social protection floors are not a purely technical or financial affair. They are also strongly determined by their socio-political dimension which consists of diverse interactions between government and political actors, civil society (NGOs, trade unions, social movements) and the other 'unorganised' social forces (including elites, spontaneous popular movements, influential leaders, etc.) (Hickey 2008, Fonteneau 2015).

   However, donor support that specifically targets the socio-political dimension of social protection systems at country level, remains limited (Fjeldstad, 2014). Encouraging a constructive state-society engagement around taxes and raising public revenue in view of extended social protection constitutes an important working area that external donors may need to consider. This could be particularly important in countries where public revenue based on personal income tax accounts are low due to a narrow set of taxpayers, poor capacity to expand the tax base towards the informal economy and resistance from the elite and wealthy individuals with plentiful opportunities to conceal their income' (Fjeldstad, 2014, Fonteneau, 2015). Furthermore, support towards tripartite representation and the participation of other stakeholders in the governance of social protection systems may be advisable as they have shown to be effective in safeguarding social contributions (Duràn-Valverde et al. 2012).

2) Practically, donors or development organisations, who seek to engage with the political dimension of social protection will have to accept **that countries take 'control' of their own policy agendas**, whether or not this involves the donor's preferred instrument of social protection (Whitfield, 2009; Hickey *et al.* 2008). It will also require them to interact or work with actors whom they are not necessarily used to work with (e.g. trade unions, private sector, faith groups, political parties, etc.…).

3) Lessons learned from cases of successful social protection reforms concerning **mechanisms to generate fiscal space and public revenue** need to be considered when working towards sustainable social protection floors. Examples of such mechanisms include social contributions which have shown to be effective in developing countries together with labour formalisation policies and Interventions that extend social security to independent workers and to extend coverage to micro and small enterprises (e.g. the rural semi-contributory pension scheme in Brazil) (Duràn-Valverde et al. 2012). Also the renegotiation of distribution of wealth generated by the exploitation of natural resources (e.g. Botswana and Bolivia) has shown to be a potential mechanism to widen fiscal space (Duràn-Valverde et al. 2012). The applicability of such mechanisms will of course be determined by the specificity of the social protection systems that are being put in place as well as the specific socio-economic, political, cultural and environmental context. For example, in cases of very high levels of informal employment, as was the case in Burundi for example, non-contributory social protection benefits may represent a viable option in the pursuit of universal coverage. Contributory mechanisms can then be extended at a later stage in line with the appropriate developments in the labour market (Duràn-Valverde et al. 2012).

4) **Coordination between development cooperation actors** who support and promote the development of social protection systems at national level will be important. Their actions are often complementary because they are directed to different kind of actors at country level (governments, civil society organisations, providers of social protection services, etc.) and include a variety of strategies (capacity development, financial and technical support, advocacy, etc.). Belgian government actors could for example strengthen their participation in existing platforms (e.g. The MASMUT platform and the Be-Cause Health Working Group on Social Protection) in order to discuss the vision of Belgian development actors on this issue and to improve the coordination and complementarity of their support in partner countries. In particular, the coordination between the bilateral governmental cooperation and the actions of Belgian NGOs in terms of supporting lobby and advocacy strategies as well as capacity development of their civil society partners are essential for the development of social protection systems at country level (Fonteneau et al. 2015).

8 Annexes

A.1 Overview of the Macroeconomic Framework

A.1.1 Introduction

The macroeconomic approach adopts a numeric framework, known as a financial programming framework, which is designed to assist in the development of a consistent approach to the different aspects of economic policy. The key feature of the financial programming framework is that it is based on a comprehensive view of the national economy, comprising four inter-dependent sectors. The four sectors are:

- The Real Sector, which relates to productive activities of the economy.
- The Fiscal Sector, which captures government transactions.
- The External Sector, which includes all transactions between the country in question and other countries.
- The Monetary Sector, which includes the transactions of the banking system and of the central bank.

Whilst not a sector in its own right, attention is also given to the debt of the central government, as the stocks and flows of the government's debt are reflected in the fiscal, external and monetary sectors.

At the outset, it should be clearly understood that the macroeconomic framework is not an economic model. It does not constitute a set of equations which attempt to model the behaviour and interaction between different sets of economic agents. In economic terminology, it is not based on a set of econometrically estimated behavioural and/or structural relationships which drive economic outcomes.

The macroeconomic framework is a tool for ensuring the consistency between different sets of assumptions about the future course of the economy. In other words, by starting with a set of assumptions about the economy (e.g. GDP growth), the framework assesses the impact of different policy options on the four sectors of the economy in a consistent manner.

A.1.2 Key components

The starting point for the macroeconomic framework is the tables published on the country's macroeconomic performance by the IMF. These tables are produced in a standard format for all countries as part of the IMF's Article IV surveillance activities. The standard IMF documents include five tables that are replicated in the macroeconomic framework used for this analysis. These are:

- Table 1: Selected Economic Indicators, containing summary data from the real, fiscal, monetary and external sectors.
- Tables 2 & 3: Fiscal Operations of Central government, describing the government budget and its financing.
- Table 4: Monetary Accounts, showing the paths of broad money, net foreign assets and net domestic assets.
- Table 5: Balance of Payments, including indicators on gross international reserves.

These tables are transposed into Excel and expanded further as necessary, to produce data for the fours sectors of the economy described above. This is done through the following six work sheets:

- **Overview:** The Overview sheet includes projections for headline macroeconomic variables such as real GDP growth, GDP deflator and the exchange rate.
- **Real:** The Real sheet provides the projections of the real sector, including values for GDP and its components (including consumption and investment).
- **Fiscal:** The Fiscal sheet provides information on the annual budget for the government, including projections for domestic revenue, expenditure, grants and deficit financing.
- **Money:** The Money sheet provides projections for the monetary sector. It includes the path of key monetary aggregates, such as credit to the private sector.
- **External:** The External sheet provides forecasts for the Balance of Payments, including projections for imports, exports, and gross international reserves.
- **Debt:** Whilst the Debt sheet does not reflect a sector as such, it performs a simple function by taking the debt disbursements, combining these with the existing debt stock and forecast repayments, to project the debt variables into the future.

The different sheets are all linked to each other to ensure consistency, as discussed further below. Additional worksheets are used to group together the key macroeconomic assumptions, to include the data on health resources and to present charts of macroeconomic indicators.

A.1.3 Theoretical approach

The framework uses four macroeconomic accounting identities to ensure consistency between the different sectors of the economy. A macroeconomic accounting identity is a relationship between a set of economic variables that must hold true by definition. For example, GDP must be equal to the sum of its components (investment, consumption, imports and exports). Each sector has its own accounting identity.

The framework ensures consistency between the sectors in two ways. Firstly, the macroeconomic framework ensures that all of the accounting identities are met. It does this through the use of a “residual” item, which is set via a formula to ensure that the identity is always true. For example, if we have already determined GDP, investment, imports and exports, then there can only be one value for consumption that is consistent with the accounting identity for the real sector (i.e. Consumption = GDP – Investment – Exports + Imports). In this case, consumption is known as the “residual”.

Secondly, the macroeconomic framework ensures that wherever a variable features in more than one sector, the projections for that variable are the same in both sectors. For example, Imports features in both the real sector (as a component of GDP) and the external sector (as a component of the Current Account). Thus, the macroeconomic framework will ensure that whatever values are used for Imports in the external sector are also used in the real sector.

A.1.4 Macroeconomic accounting identities

This section will examine the accounting identities used in each sector and the residual that is used to balance them.

A.1.4.1 The real sector

Basic Identity:

GDP = Consumption (Private + Public) + Investment (Private + Public) + Exports – Imports

Residual:

Private Consumption

The primary assumption in this sector is that of growth in real GDP. This is used to extrapolate the current figure for GDP into the coming years. An assumption is also made about the future path of the GDP deflator in order to convert between real GDP and nominal GDP.

Having determined the value of GDP in future years, it is necessary to determine its composition. Public consumption (i.e. government current expenditure) and public investment (i.e. government development expenditure) are determined by the Fiscal sheet (see below). By making assumptions about the share of investment in GDP, it is possible to produce forecast figures for investment. Finally, Imports and Exports are linked from the External sheet (see below).

Therefore, having determined the total value for GDP and all but one of its components, the residual component must be set to ensure consistency with the basic accounting identity. In this case, private consumption is used as the residual and is equal to GDP plus imports, less exports, private investment and total government spending.

A.1.4.2 The fiscal sector

Basic Identity:

Total Revenue – Total Expenditure = Net Borrowing

Residual:

Net Disbursements of Domestic Debt

This sector is focused on the government budget. Firstly, tax revenue is determined (based on an assumption about its share of GDP) as well other sources of revenue, such as grants and non-tax revenue. External grants are converted to local currency using the exchange rate.

Assumptions are made about the government's expenditure (excluding debt service). The interest payments on debt are calculated in the Debt sheet, such that a higher deficit in one year is reflected in higher interest payments in the subsequent year. These factors determine the government's overall deficit and hence the government's borrowing requirement. Future disbursements and principal repayments on external debt are determined by assumption and converted to local currency using the exchange rate.

All that remains is to determine the net disbursements on domestic debt. This is the residual in this sector and it set at a level to balance government borrowing with the overall deficit.

A.1.4.3 The monetary sector

Basic Identity:

Net Foreign Assets + Net Domestic Assets = Broad Money

Residual:

Net Claims on Other Sectors (a component of Net Domestic Assets)

Net foreign assets are determined by the net flow of foreign currency into the country, which is given by the change in official reserves in the balance of payments (i.e. from the External sheet).

Net domestic assets includes net claims on government and net claims on other sectors (i.e. the private sector). Net claims on government is determined by the outstanding stock of government debt, which is taken directly from the Debt sheet. Net claims on other sectors is the residual in this sector and therefore calculated at the end.

Broad money can derived from the economic relationship between nominal GDP, broad money and the velocity of money (PY=vM). Broad money is therefore calculated by dividing nominal GDP by an assumed figure for the velocity of money.

Having determined everything else using the above assumptions, net claims on other sectors is the residual and is set to ensure compliance with the accounting identify for this sector. It is equal to broad money less net foreign assets and less net claims on government.

A.1.4.4 The external sector

Basic Identity:

Current Account + Capital Account + Financial Account + Errors & Omissions = Change in Official Reserve Assets

Residual:

Change in Official Reserve Assets

The external sector is essentially a representation of the balance of payments, which captures the flow of foreign currency into and out of the country in question. The current account is determined by assumptions about the import and export of goods and services, income and remittances. Also included in the current account are government interest payments on external debt (taken from the Debt sheet) and external budget support grants (taken from the Fiscal sheet).

The capital account includes external project grants (taken from the Fiscal sheet). The financial account requires assumptions about foreign direct investment and portfolio investment. The only other significant components of the financial account are the disbursements and repayments of external loans to government, which are taken from assumptions in the Fiscal sheet.

Errors and omissions are assumed to be zero in the future. The only item left is the change in official reserve assets, which is used as the residual to ensure consistency in this sheet. The change in official reserves is therefore given by the sum of the current account, the capital account and the financial account.

A.1.4.5 Key linkages between the sectors

As discussed above, the second source of consistency comes from the use of only one set of forecasts wherever a variable appears in two different sectors. Table A1 summarises the linkages between different sheets. It is important to note that the link is created from the sheet listed on the left hand side to the sheet list along the top of the table (i.e. imports from the External sheet are transferred to the Real sheet.) To avoid confusion, only the most important linkages are shown, these correspond with the linkages discussed in the text above.

Using the above framework, it is possible to condense the forecasting of the economy, and its various sectors, to just a handful of key assumptions. Using these assumptions, the linkages and identities described above, and a few further details, it is possible to then project a range of macroeconomic variables and indicators into the future.

The framework therefore operates by retaining the IMF projections for the short and medium term and then making a number of high level assumptions for key macroeconomic variables over the long term. These assumptions are based upon an extrapolation of the medium term IMF projections and an analysis of the available information on the economy of the country in question.

Table A.1 Key inter-sector linkages in the macroeconomic framework

To From	Real	Fiscal	Debt	Money	External
Real		GDP (for Revenue projections)		GDP (for Broad Money projections)	
Fiscal	Government Spending		Net Disbursements on Domestic Debt Disbursements on External Debt		External Grants Disbursements on External Debt
Debt		Interest Payments Principal Repayments on External Debt		Debt Stock (for Net Domestic Assets)	Interest on External Debt Principal Repayments on External Debt
Money					
External	Imports Exports		Exchange Rate	Change in Official Reserve Assets	

A.1.5 Incorporating health resources

Health resources can be divided into two forms; revenues and expenditures. It is important to be clear on the distribution to avoid double-counting the resources. For example, a grant from a donor would be included as a revenue but may also be counted as an expenditure by the government. Table A.2 shows the Health resources incorporated into the macroeconomic framework and the sectors that they are linked directly to.

Table A.2 Health resource flows in the macroeconomic framework

Resource Flow	Sector Linkages
Revenues	
External project grants included in the budget	**Fiscal, External**
External project grants not included in the budget	**None**
External project loans	**Fiscal, External, (Debt)**
Tax and non-tax revenues collected by the government and earmarked for Health	**Fiscal**
Domestic borrowing by the government and earmarked for Health	**Fiscal, (Debt)**
Expenditures	
Government (Current) Expenditure	**Fiscal**
Expenditure by external project grants not included in the budget	**None**
Expenditure by private individuals and companies	**Real**

These resources are integrated into the appropriate sectors of the macroeconomic framework. This ensures consistency in both the macroeconomic projections and the Health expenditure projections in two ways.

First, those resources that are determined exogenously (either through external factors or by policy decisions) are linked to the macroeconomic framework so that changes in these variables have a macroeconomic impact. For example, higher grants from external donors may (i) increase government expenditure in the fiscal sector and (ii) increase the change in official reserves in the external sector (amongst other effects). Equally, a decision to increase taxes to finance Health will (i) increase the deficit and domestic borrowing and (ii) by higher interest payments on that debt, further increase the deficit in future years (again amongst other effects).

Second, Health resources can be linked to macroeconomic variables to model their size under different scenarios. For example, external grants and loans will be converted into local currency via the exchange rate and domestic resources can be linked to GDP growth to see how they change under different scenarios.

Using the framework above, it is then possible to insert different assumptions for key macroeconomic variables and different Health financing mechanisms to examine scenarios for Health expenditure into the future. These scenarios can be supported by various indicators to assess the plausibility of the scenario (e.g. is the share of Health expenditure of GDP excessive?) and its macroeconomic stability (e.g. is government debt sustainable? Is the balance of payments stable?).

A.2 Data and Assumptions

A.2.1 Time Series

Data and findings cover the period from 2008 to 2030, and the baseline for projections is 2013. For simplicity when converting Burundian fiscal years to calendar year 2029/30 equates to 2030.

A.2.2 Macro Data

Underlying macroeconomic data is taken from the International Monetary Funds' (IMF) World Economic Outlook (WEO) database (October 2013) and the most recent country-specific IMF Article IV publications. The past and near future estimations are agreed by country government so can be viewed as official country data. The medium term projections (from around 2015 – 2020) meanwhile are produced by IMF staff who have close interaction with government.

After 2020 the methodology for projecting longer term (up to 2030) are set out in Table A.3. National Public Expenditures and Revenues are set to grow towards the average proportions for each income status; e.g. Tax to GDP ratio set depending on if the country is expected to become a low, middle or high income country. Averages by income status were found from the World Bank Development Indicators database. Other key variables such as Exchange Rates remain stable over the longer term.

Table A.3 Macro Economic Targets by Income Status

	Low Income	Middle Income	High Income
Tax:GDP	17%	24%	34%
Current Expenditure:GDP	14%	21%	29%
Donor Funds:GDP	8.0%	0.3%	0.0%

Source: World Bank Development Indicators

This provides us with a 'business as usual' scenario and allows us to compare the resultant key macro indicators from imposing health care scenarios.

It must be noted that within this baseline a key assumption is that external financing will decline in real terms over the projection period. This assumption affects the macroeconomic projections – as well as the sector-specific health funding scenarios – through budget and programme support as part of government revenue. Part A.4 of this annex gives an overview of the reasoning for declining development assistance in the near future. In sum, sources suggest that in the medium term external funding will remain stable at best and decline in low income countries[27].

[27] See: http://www.oecd.org/newsroom/aid-to-developing-countries-rebounds-in-2013-to-reach-an-all-time-high.htm, and http://devpolicy.org/reports/PB7-Global-aid-in-2013.pdf.

A.2.3 Health Expenditure Data

The model includes details on funding which is available for health from all sources. Background data (2008 – 2013) is taken from the World Health Organisation (WHO) Global Health Expenditure Database which provides access to country-specific National Health Accounts (NHA) data.

Resource needs describe the estimated level of funding required to provide the basic level of health services a country needs. They are set for each country to reflect the maximum of three spending options as per current international health financing norms (see McIntyre and Meheus, 2014). This would raise the country to the global average for health spending and are as follows:

- 86 USD per capita;
- 5% of GDP; or
- Current Government and Donor Health Spending.

A.3 Regression Findings for Public Expenditure Growth and OOP

The methodological background to the public health spending and out-of-pocket multipliers to GDP are elasticities, obtained as follows.

The global pattern of total health spending (which includes both public and private expenditure) is closely related to national GDP. Data from the World Health Organisations based on National Health Accounts (NHA) for the years 2001-11 shows that the global average of Total Health expenditure (THE) is 7.2% of GDP. Public health spending (general government expenditure on health only) averages 5.7% of GDP globally.

However, THE is not quite proportional to GDP. Figure A.2.i shows a scatter-plot of total health expenditure (THE) vs GDP (both per-capita) by country for the years 2001-2011. As can be seen, THE is strongly correlated to GDP (the r-squared value is 0.94, although the log-log plot conceals a large variance, particularly at high levels of GDP per capita). Globally, THE shows an elasticity of about 1.1 with respect to GDP, implying that THE will rise slightly faster than GDP on average.

Out of pocket spending on health is somewhat more variable than total health expenditure (THE), but the National Health Accounts (NHA) estimates also show a global correlation with GDP, as shown in Figure A.2.ii below.

As can be seen, the global elasticity for OOP is about 0.86 – implying that OOP rises more slowly than GDP, and that OOP is a larger proportion of household income in poorer countries. This implies that OOP is significantly lower as a proportion of household income in those countries with higher GDP per capita.

Figure A.2.i - Global Health Spending and GDP

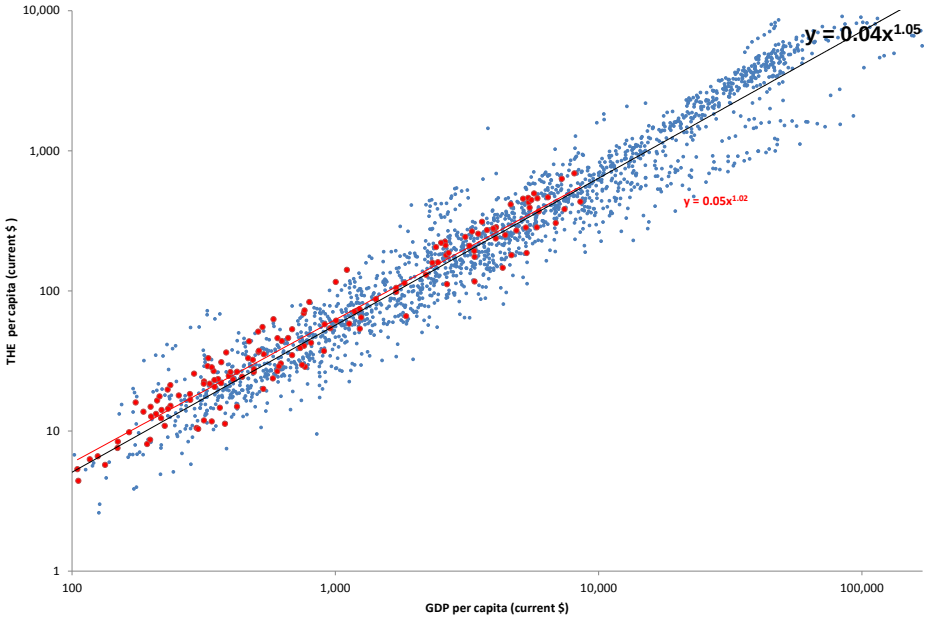
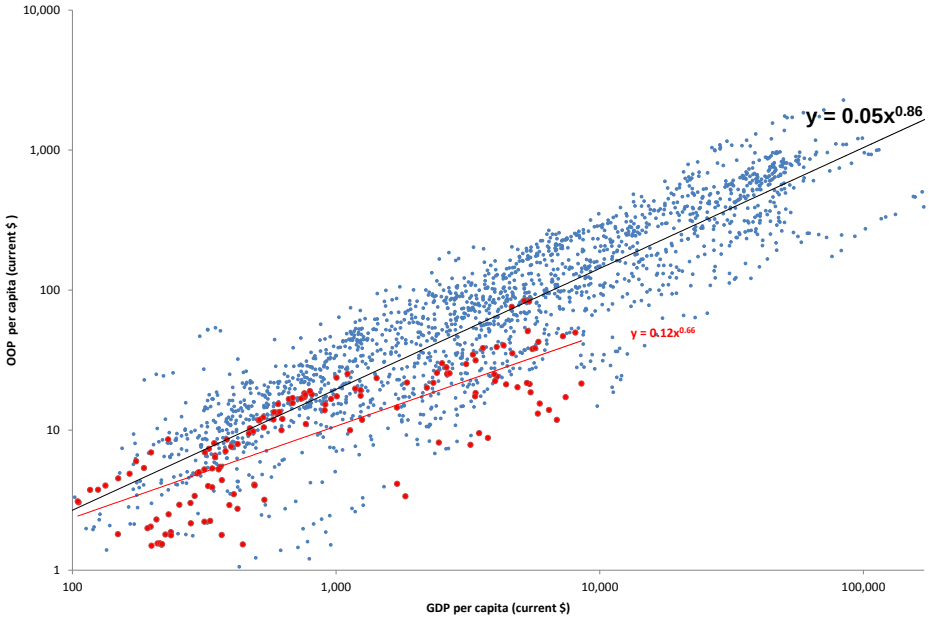


Figure A.2.ii - Out-of-pocket expenditure and GDP



Source: Robert Greener, OPM

Note: Regressions used NHA data combined with IMF GDP estimates on a panel of data. Global data shown in blue. The red a sub-set of data points are for SADC countries, the purpose of these graphs originally were to position the SADC countries within a global context, not to come up with internationally valid SADC-specific elasticities. The blue data points are valid for this report for EAC countries.

A.4 Approach to Projected Donor Funding

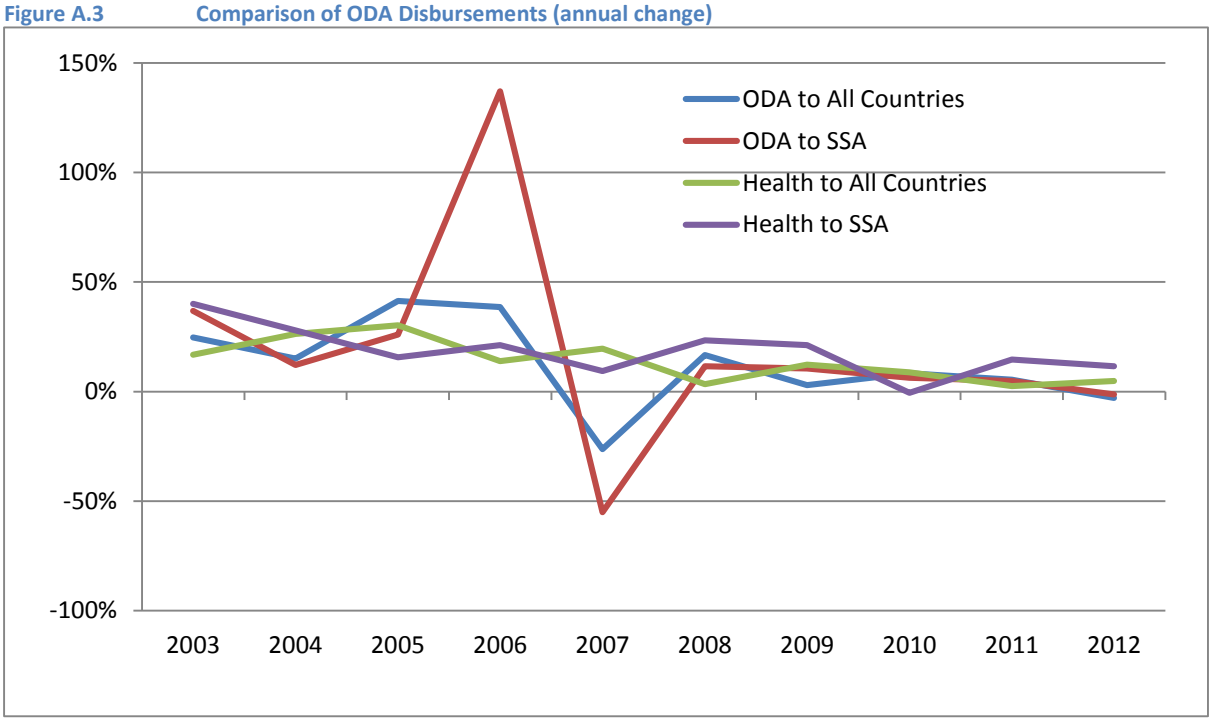
Within this analysis a key assumption is that external financing will decline in real terms over the projection period. This assumption affects the macro economy (through budgetary revenues and deficit), as well as the sector-specific health funding scenarios. This section gives an overview of

past trends in Overseas Development Assistance (ODA), and the reasoning for declining development assistance in the near future.

Medium term growth rates (2014 – 2016) for international funding are sourced from the OECD. The OECD projections estimate that growth in international aid will be 9% in 2013 and remain at zero percent for the three years from 2014 to 2016. This refers to all ODA from all donors to all countries.

Comparing historic disbursements of total ODA, health ODA, Sub-Saharan African ODA, and SSA Health ODA – see Figure A.3 – it is clear that the trends are not divergent. Therefore is has been assumed that medium term disbursements to health would not differ substantially from monies from donors to recipient countries for ODA in general. The total ODA annual growth rates are superimposed onto the baseline data for each separate country.

Figure A.3 Comparison of ODA Disbursements (annual change)



Source: Projections from: OECD Outlook on Aid (http://www.oecd.org/dac/aid-architecture/OECD%20Outlook%20on%20Aid%202013.pdf)

Over the longer term two sources suggest overall ODA will be flat (OECD and Development Policy Centre):

- The OECD suggests a rise to middle income and decline to low income (especially Africa) – a function of soft loan availability over grants. There may be a movement towards Asia so Asian aid is equal to African[28].

- The Development Policy Centre concludes that traditional sources of aid may decline, but that this could be offset by rising non-traditional sources, leading to the "overall level of external aid for developing countries remains flat for several years"[29].

[28] http://www.oecd.org/newsroom/aid-to-developing-countries-rebounds-in-2013-to-reach-an-all-time-high.htm.

[29] Davies, R and la O', M. (2013).

A.5 Why does health spending follow entrenched patterns?

There are numerous reasons why health spending has followed the patterns it has, and why those patterns have not matched the health problems facing developing countries.[30]

Budgetary methodologies. Planning for the health sector, and the budgetary allocations to complement that planning, has traditionally been done on a historical basis. That is, budgeting has usually focused on incremental changes from the previous year's patterns, with no significant efforts made to assess how appropriate or valid last year's spending actually was. The result is often continued inefficiencies.

Incentives. There are many inherent incentives for the provision of higher cost care that can be found in hospitals. For many health professionals, prestige and monetary rewards are generally associated with higher levels of care, the use of costly technology, and specialization. As a result, not only do medical personnel have the incentive to avoid employment in primary health care situations, but to encourage the use of higher cost services as well.

Political and administrative processes. Some of the patterns of spending result from both political and administrative processes that inhibit efficiency. In the case of staffing, because many health sector personnel are government workers, employing large numbers of potentially unnecessary staff may result from income- generation policies focused on avoiding civil unrest.

At the same time, because many of these workers are poorly paid and perhaps trained, they have no incentives, and sometimes no ability, to provide excellent care in difficult circumstances. In the case of drugs, inefficient spending results from several factors: cost-effectiveness criteria are not used to select drugs, so that high cost drugs are often used instead of lower-cost alternatives; purchases are done on small scales, foregoing volume discounts; procurement is rarely done through competitive bidding; significant losses result from poor storage and inventory management, expiration, and theft; irrational prescription practices; and problems of patient compliance. Estimates are that as a result of these six factors, for every $100 spent on drugs in Africa, $88 are lost (see Figure 1.2).

Lack of information. The pattern of spending in health care also reflects to some degree what consumers want. What consumers want may not necessarily be the same as what they should want. While this may seem rather paternalistic or insulting, suggesting that consumers do not know what is best for them, in the case of health care, this is often true. The fact is that patients do not have full information—they do not fully understand their disease or health condition, nor the options available to treat that. As a result, consumers may not seek the types of care they really should, as in the example of individuals obtaining drugs or vaccines that are not effective or safe.

Costs. Under-consumption of cost-effective services may occur because of a lack of demand for these services. In addition to lack of information, low demand stem from the prospective patient's unwillingness or inability to pay the prices of such treatments, or to incur the costs of travel and time required to obtain these services.

Political and social power. Public spending on health care is not immune from the pressures of political and/or social power, which only compounds existing inequities. Urban communities benefit more from the presence of health facilities than their rural counterparts due to their greater ability to organize and demand such services. Similarly, those in the medical profession probably have greater

[30] This section is drawn from: World Bank Institute: Holly Wong and Ricardo Bitrán - Module 5 - Designing a Benefit Package: Prepared for the Flagship Course on Health Sector Reform and Sustainable Financing; October 1999

ability to promote their own interests than the general public; as a result, they can argue the case for the establishment of additional hospitals and the purchase of expensive technology. Their ability to do so stems from both their political power and the clinical expertise they have.

At the same time, there is an intrinsic feature of much of health care that explains the mismatch between health problems and health spending. As mentioned previously in discussions of public goods and externalities, although many health conditions could be avoided through appropriate use of preventive services, most people have no incentives to seek those services.

The key point in this discussion is that health care represents a combination of interests: providers and consumers, with a role for the government in helping to facilitate some of the interaction between them. In bringing together these interests, it is necessary to recognize and address the incentives each faces and to address those. At the same time, it is important not to allow those incentives to dominate the decision-making process if that results in less than ideal outcomes in terms of overall health."

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